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Unicorn's horn or guideline? On the meaning of an unusual diagonal line in an unfinished relief of a bovine on the Kalekapı tomb at Donalar, Paphlagonia

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This essay concerns a curious feature in one of the numerous reliefs on the façade of the monumental rock cut Kalekapı Tomb at Donalar, in the Amnias Valley of Paphlagonia. The relief, which shows a creature with a long diagonal relief line extending between its head and the corner of the relief panel, has been interpreted by some as a unicorn. Others have identified it rather as an unfinished bull, arguing that what has been taken as a 'horn' should be understood as a guideline left standing proud.¹ In agreement with this latter identification, my purpose here is to contribute some further thoughts on the significance of such a remnant of the carving process. The appearance of such a line is very unusual; diagonal guidelines may have been widely employed in drawing and carving, particularly for compositions with strong diagonal elements, but traces of them are very rare. It is proposed here that the diagonal line in this relief is at once evidence of the use of such oblique guidelines in rock relief carving, but that at the same time it survived because the carving technique was erroneous. Rather than using an incised guideline, inexperienced carvers worked from a relief line in an attempt to position the bull's head. This was ultimately unsuccessful, the composition awkward and with a notable gap on the left – reasons which may have contributed to the abandonment of the project, the relief being left unfinished and the aberrant 'guideline' still remaining to this day.

Kalekapı and its reliefs

The Kalekapı tomb is considered one of the earliest of several monumental rock cut tombs scattered through a long valley in Paphlagonia, overlooking the fertile land and settlements nearby.² Often these tombs are isolated on particularly visible rocky outcrops or hills, rather than being located in larger rock cut tomb necropoleis, as they are in Caria and Lycia, for instance. Kalekapı, located near the modern village of Donalar, is a good illustration of this, positioned high up in the cliff face of an outcrop overlooking the lush valley plain below (Figs. 1 and 2). It is a particularly impressive example, with two chambers cut into the rock, fronted by a spacious porch with two thick, unfluted columns. Its façade is adorned with an array of reliefs cut into a rock-carved pediment and surrounding the porch below (Fig. 3). Tombs such as this have been attributed to 'chiefs', who rose to power in the region in a later 5th century/early 4th century BC phenomenon possibly associated with economic and power restructuring in the Persian Empire, initiated either by locals themselves or the Persian administration.³

¹ Bittel and Naumann 1965: 75–76; Johnson 2010: 204. The process of carving of these reliefs has been discussed in Johnson's study of Paphlagonian tombs in the landscape, an important feature of which is an approach which sees the tomb (and others in this area) not as a static identity marker, but as part of a more extensive social process of 'becoming': Johnson 2010: 200–7 especially 204–6. See also Johnson 2010: 122, 246 and catalogue entry C7 on 331–34. I deviate from the detailed steps of carving she suggests (Johnson 2010: 204–5) and I go into greater detail on the reasons for the diagonal line. Many thanks to Ömür Harmanşah and Peri Johnson for their feedback and permission to cite unpublished works. Thanks to the British Institute at Ankara and the University of Liverpool for research fellowships which supported my work, to the anonymous reviewers of this paper, to Richard Read who read and commented on a draft and to Stephen Mitchell and Sophie Violet Moore, my intrepid travelmates, with whom I visited the astonishing tombs of Paphlagonia. NB. although I have visited the Kalekapı Tomb, I have not conducted close autopsy of its reliefs; observations here are based on details already provided in published work.

² von Gall 1966, counts 15 such tombs in his extensive treatment; Summerer and von Kienlin 2010 overviews three of the tombs, including Kalekapı. The tomb is often dated to the late 5th century BC, although Johnson 2010: 332–3 suggests first half of the 4th century BC. On settlements and tombs in the area, as well as Johnson 2010 see Leonhard 1915; Bittel and Naumann 1965; von Gall 1966; Donceel-Voute 1979; Marek 1993, 2003; Barat *et al.* 2009; Summerer 2009; Summerer and von Kienlin 2010.

³ von Gall 1966: 54–7 ('historische Fragen'); Johnson 2010, with discussion of the concept of 'chief' or dynast at 133–40; Summerer and von Kienlin 2010.

The most impressively monumental decorated tombs tend to share a basic iconographic repertoire. Pediments often show images of a man battling a lion, usually and surely correctly interpreted as Herakles and the Nemean lion – a theme obviously meaningful for the ‘chiefs’ of this area.⁴ Alongside this seemingly ‘Greek’ theme, the tombs are lushly decorated with an abundance of creatures which are more common to the decorative art of the Achaemenid Empire. The most clearly ‘Persian’-looking of them is the creature usually called the winged lion-griffin, which is essentially a feline figure with wings and what are obviously horns, elaborately curling up from the top of the head.⁵ Other animals include ordinary felines and bulls.

Kalekapı’s façade has most of these elements. A Herakles and Nemean lion in the gable is eroded and difficult to see. It was early on interpreted as a lion attacking another beast, as shown in the illustration in von Gall’s book on the tombs, but in fact what is shown is a human male in a lion skin (Herakles) stretching across the left half of the space to his lion foe on the right, his right leg shown straightened and fully extended, his foot dangling past the upper left corner of the colonnaded porch entrance (Fig. 4; the toes of the foot are just about visible in Fig. 3).⁶ Flanking the lower edges of the pediment and the top of the porch are two large pendant lion-griffins, faces shown frontally. Below the left lion-griffin is a relief of a bull depicted with its head in three-quarter view, lowered and with its right foreleg raised to show it pawing the ground.⁷ Opposite this on the right side in two registers are a crouching feline and the so-called ‘unicorn’ relief which is the subject of this paper (Fig. 5).

In contrast to the other figures on the tomb façade, which appear to be finished with stylized incised details on their bodies, this figure has been carved only in silhouette, the background having been removed around its outline with a point chisel or a pick, but no internal detail added. The surface of the figure is, like most of the surface of the cliff face, smoothed only with a flat-nosed tool – possibly a flat chisel, but given the extent of the work and the consistent direction, running right to left diagonally over the whole smoothed part of the cliff face, perhaps more likely an adze or axe, used to trim and smooth off the stone before decorative work began. The hulking profile of the beast in the ‘unicorn relief’ at first glance resembles a misshapen boar, but with a very long protrusion – the ‘horn’ – running between the forehead or nose and the upper left corner of the relief field.

This figure was identified as a unicorn already in the 19th century. Bittel questioned the interpretation, but it was upheld by von Gall in his 1966 book on the Paphlagonian tombs and their reliefs, and has been accepted in some more recent scholarship.⁸ Most scholars have noticed, however, that the silhouette of the figure in fact closely resembles the bull shown on the other side of the tomb’s porch, and those who identify the figure as a unicorn have noted that it takes the form of a bovine *monoceros*.⁹ This would deviate from later ideas of a unicorn as a single-horned goat or equine, rather than a bull.

It should be noted that within the repertoire of Paphlagonian tombs, reliefs depicting bulls are rare. They appear as figured column capitals both at Kalekapı and at a rock cut tomb at Iskilip.¹⁰ The capitals of the columns fronting the porch of Direklikaya, a rock cut tomb at Salarköy, may also have been carved as bulls, although in that case the heads are missing and there is a possibility that the creatures were either sphinxes (sphinxes are shown as capitals of the relief-carved columns fronting another of the rock cut tombs from the region) or winged lion-griffins.¹¹ Reliefs of

⁴ See Summerer 2009; Johnson 2010: 121–30.

⁵ For discussion of differences with ‘central’ Persian exemplars: Summerer and von Kienlin 2010.

⁶ Identified as fight of beasts by Leonhard 1915 and von Gall 1966. More recent drawings of the façade are included in Summerer and von Kienlin 2010: 199 fig. 4 (along with an excellent photo) and Johnson 2010: 503 fig. 6. On Herakles images in Paphlagonia, see Summerer 2009.

⁷ Johnson 2010: 124, who notes that the positioning makes the porch a dangerous space. According to Professor Garry Marvin, Roehampton University, personal communication (2015), “Pawing the ground by a bull is a hesitant behaviour threatening the possibility of attack – an actual attack might or might not follow.”

⁸ Unicorn: Fourcade 1811: 40; Leonhard 1915: 246–57, especially 253–56 (largely followed by Gökoğlu 1952: 65–71, especially 70); von Gall 1966: 18, 35–37; Summerer and von Kienlin 2010: 212–15. Unfinished bull: Bittel and Naumann 1965: 75–6; Johnson 2010. Marek 2003: 30, merely mentions ‘a large, cattle-like beast with a long horn extending from the brow’ (ein massiger, rinderähnlicher Tierkörper mit einem langen, aus der Stirn ragenden Horn). von Gall 1966: 37 n. 175 also suggests the possibility of a bovine *triceratos*, if other protrusions above the creature’s head should also be seen as horns.

⁹ Leonhard (1915: 254), saw a Wisent (Bison), with two ‘normal’ horns *above* the head (he is mistaken in this, as Bittel and Naumann [1965: 255] noted – there is only one), *plus* the long thin straight horn; von Gall 1966: 18 (who describes it, though, as having a head more like that of a predator than cattle); Summerer and von Kienlin 2010, 212.

¹⁰ Hirschfeld 1885: esp. 21; von Gall 1966: pl. 10.3.

¹¹ See Summerer and von Kienlin 2010.

bulls are, however, confined to Kalekapı, where, as noted above, a finished one is certainly shown to the left of the porch.

An apparent particular interest in bulls at Kalekapı is one point supporting the identification of the supposed ‘unicorn’ as an unfinished depiction of a second bull in that tomb’s collection of reliefs, perhaps, as some have suggested, a later addition. Other points concern the improbability of the depiction of a unicorn and peculiarities of the Kalekapı relief’s composition and execution.

Unicorns in antiquity

It is unlikely, as will be established, that the Kalekapı figure represents a unicorn, but this is not because they were unknown, exactly, in antiquity.¹² It is worth a brief digression on the intriguing, but very spare Classical traditions of ‘unicorns’ in order to allow some appreciation of ideas against which the Kalekapı relief might be placed.

Discussions of such creatures appear in Classical sources, mostly later than Kalekapı, but most or all of which may ultimately derive from the writings of Ctesias. Ctesias was a Greek physician in the Persian court in the late 5th to early 4th centuries BC, about the time the tomb was constructed.¹³ He wrote a book on India, which contained various descriptions of unusual and fantastic animals including the ‘one-horned Indian ass’.¹⁴ His writings are preserved in fragments quoted by other authors, among them the Roman Imperial period writer Aelian, and were collected together in an epitome by the later Byzantine patriarch Photius.¹⁵

Aelian quotes Ctesias in his own description of the unicorn, in relation to the oddly black knucklebones of the creature, knucklebones being anyway unusual for an equine (Aelian, *On Animals* 4.52). Earlier in this same passage, which may all derive from Ctesias, Aelian describes the creature as a wild ass as big as a horse, “white except for the head, which approaches purple, while their eyes give off a dark blue colour. They have a horn on their forehead as much as a cubit and a half long; the lower part of the horn is white, the upper part is crimson, while the middle is jet black.”¹⁶ The horn of the animal was prized, he notes, and considered to have magical, curing powers.

Later on (*On Animals* 16.20), Aelian describes another Indian one-horned creature, which sounds rather different: “there is said to exist a one-horned beast which they call *cartazonus*. It is the size of a full-grown horse, has the mane of a horse, reddish hair, and is very swift of foot. Its feet are, like those of the elephant, not articulated and it has the tail of a pig. Between its eyebrows it has a horn growing out; it is not smooth, but has spirals of quite natural growth, and is black in colour. It is also said to be exceedingly sharp.”¹⁷ This was a very aggressive animal, and Aelian only describes the power of the animal’s horn in terms of its capacity to harm, rather than heal.

Aristotle also very briefly mentions the unicorned Indian ass as well as a one-horned oryx in his *History of Animals* book 2.1 (499b, 16–20): “Furthermore, of animals some are horned, and some are not so. The great majority of the horned animals are cloven-footed by nature, as the ox, the stag, the goat; and a solid-hooved animal with a pair of

¹² Discussed in von Gall 1966: 36, with refs; Summerer and von Kienlin 2010. On ‘unicorns’ generally, especially on the literature: Shepard 1930; Rausing 1972; Gotfredsen and Born 1999; Lavers 1999 (with further refs). On Indian and Near Eastern myths, representations and their relationship to Western art: Scharma 1957; Panaino 2001; Tagliatesta 2007.

¹³ Date of tomb, see n. 2, above.

¹⁴ Lavers 1999; Panaino 2001:157–8; Tagliatesta 2007: 177–8.

¹⁵ *FGrHist* 688, F45 (Photius).

¹⁶ *FGrHist* 688, F45q; Aelian, *On Animals* 4.52: ὄνου ἀγρίου οὐκ ἐλάττους ἵπων τὰ μεγέθη ἐν Ἰνδοῖς γίνεσθαι πέπυσμαι. καὶ λευκοὺς μὲν τὸ ἄλλο εἶναι σῶμα, τὴν γε μὴν κεφαλὴν ἔχειν πορφύρα παραπλησίαν, τοὺς δὲ ὀφθαλμοὺς ἀποστέλλειν κυανοῦ χροῖαν. κέρασ δὲ ἔχειν ἐπὶ τῷ μετώπῳ ὅσον πήχεωσ τὸ μέγεθος καὶ ἡμίσεωσ προσέτι, καὶ τὸ μὲν κάτω μέρος τοῦ κέρατωσ εἶναι λευκόν, τὸ δὲ ἄνω φοινικοῦν, τὸ γε μὴν μέσον μέλαν δεινώσ. English translation: Scholfield 1958 (Loeb). At 3.41 Aelian says that in India there are both horses and wild asses with such horns.
¹⁷ λέγεται δὲ καὶ ζῷον ἐν τοῦτοις εἶναι μονόκερων, καὶ ὑπ’ αὐτῶν ὀνομάζεσθαι καρτάζωνον. καὶ μέγεθος μὲν ἔχειν ἵπου τοῦ τελείου καὶ λόφον, καὶ λάχνην ἔχειν ξανθὴν, ποδῶν δὲ ἄριστα εἰληγένηαι. καὶ τοὺς μὲν πόδασ ἀδιαρθρώτωσ τε καὶ ἐμπερεῖσ ἐλέφαντι πεφυκένηαι, τὴν δὲ οὐρὰν ἔχειν συός: μέσον δὲ τῶν ὀφρῶν ἔχειν ἐκπεφυκόσ κέρασ οὐ λεῖον ἀλλὰ ἐλιγμοὺσ ἔχον τινάσ καὶ μάλα αὐτοφυεῖσ, καὶ εἶναι μέλαν τὴν χροῖαν: λέγεται δὲ καὶ ὀζότατον εἶναι τὸ κέρασ ἐκεῖνο. English trans. Loeb version, as n. 16, above. There, Scholfield’s comments suggest the name could derive from an Indian word for rhinoceros. Panaino 2001, 158–9, indicates that this passage derives from the book on India by the Ionian Megasthenes (350–270 BC), not Ctesias. Strabo 15.1.56 cites Megasthenes when he mentions “horses with one horn and the head of a deer (μονοκέρατωσ ἐλαφροκράνωσ).” Only this one passage by Aelian is discussed by Lavers 1999, and he suggests that both this and Pliny’s *monoceros* (see below) are conflation of rhinoceroses and less-well known creatures of Tibet and Nepal: the so-called Tibetan antelope or Chiru (actually a wild goat, *Pantholops hodgsonii*) and the Tibetan wild ass (*Equus kiang*).

horns has never yet been met with. But a few animals are known to be single-horned and single-hooved, as the Indian ass; and the oryx is single-horned and cloven-hooved. Of all solid-hooved animals the Indian ass alone has a huckle-bone...¹⁸

Pliny later intriguingly mentions an *ox* with one horn, known in both India and Ethiopia (*Natural History* 8.30): “Ethiopia produces...Indian oxen (*Indicos boves*) with one and with three horns.”¹⁹

In the following chapter (*Natural History* 8.31) Pliny reiterates this, although specifying that these oxen also have (oddly for bovines) solid hooves, before moving on to describe another one-horned creature which recalls Aelian’s *cartazonus*, but which he calls a *monoceros*: “The fiercest animal is the unicorn (*monoceros*), which in the rest of the body resembles a horse, but in the head a stag, in the feet an elephant, and in the tail a boar, and has a deep bellow, and a single black horn three feet long projecting from the middle of the forehead. They say that it is impossible to capture this animal alive.”²⁰

Both the *cartazonus* and the *monoceros*, which are said to have elephant-like feet and tails like a boar, may ultimately be based on rhinoceroses.²¹ These were known in earlier Mesopotamia, one being shown on the Black Obelisk of the Assyrian king Salmeser III (858–824 BC) from Nimrud, now in the British Museum (Leonhard called this a ‘unicorn’ but most scholars now agree that it represents a rhinoceros).²²

Tales of rhinoceroses may have contributed to some of stories of unicorns, even if rhinos were commonly known by the time Pliny and Aelian were writing. Athenaeus, for instance, citing Callixenus of Rhodes notes their appearance in the famous pompe of Ptolemy II Philadelphus in Alexandria (*The Deipnosophists*, 196–203) and they appear in Hellenistic art such as the Nile Mosaic at Palestrina in Italy and the paintings within Tomb II at Marisa in the Levant.²³ The latter, however, also hints at ongoing ideas of more mysterious one-horned beasts. On one wall is a clearly labeled ‘rhinoceros’. On the opposite wall is a similar-looking animal with another name (Fig. 6). Only a few letters of its label are preserved:]λoφ...[, according to Jacobson, although photographs show what looks like an *epsilon* before the *lambda*.²⁴ Obviously with some disagreement about individual letters, authors have proposed ‘feline’ (*ailouros*), ‘wood eater’ (*hylophagos*) and ‘deer’ (*elaphos*).²⁵ This is neither Aelian’s *cartazonus* or Pliny’s *monoceros*, then, but another one-horned creature which was in this case visually modeled on a rhino, but potentially imagined as being some kind of deer.²⁶

Images deviating from the pure rhinoceros model are quite exceptional.²⁷ As a possible example of a *bovine* unicorn, von Gall noted a Bronze Age Cypriot base ring ware jug in the shape of a bull with what looks like a horn on its

¹⁸ Eng. trans.: Barnes 1984. I was not able to locate a Greek version of this text. ‘Huckle-bone’ is an old term for knuckle or anklebone.

¹⁹ Eng. trans.: Rackham 1967. Numbering follows the Loeb version. Note that the same passages can also be referred to as *NH* 8.75–76. Earlier in the same passage (8.30) Pliny mentions horned, winged horses (*pegasi*) and he also later (same passage) mentions Ctesias’ *mantichore*. Aelian also speaks of this *mantichore* in his book 4.21 just before he gets to the Indian ass unicorn at 4.52 – quite distinct from the *cartazonus* treated in his book 16.20. This suggests that Ctesias may have been the main source on the Indian ass-type unicorn, but possibly not on the *cartazonus* or *monoceros*, for both of these authors. The description of the Indian unicorn as an ‘ox’ (*boves*) remains an important difference in Pliny, however.

²⁰ ...*assperimam autem feram monocerotem, reliquo corpore equo simile, capite cervo, pedibus elephant, cauda apro, mugitu gravi, uno cornu nigro media fronte cubitorum duum eminente. hanc feram vivam negant capi*. Eng. trans. Loeb version as n. 19, above.

²¹ There are many discussions on this. See e.g. Lavers 1999, esp. 341–43, who as noted above (n. 17), feels that these should be a conflation of the Indian rhino, Chiru and Kiang.

²² Leonhard 1915: 254. Black Obelisk: London, British Museum, ME 118885, dark limestone, h. 1.98 m.

²³ Ptolemy’s pompe: *FGrHist* 627 F2 (Callixenus of Rhodes); Rice 1983; Foertmeyer 1988. Palestrina Nile Mosaic: Meyboom 1995. Marisa Tomb: mentioned by von Gall 1966: 36; Peters and Thiersch 1905: pl. 10; Jacobson *et al.* 2007. The rhinoceros is shown on the South wall frieze. For other images of rhinoceroses see Sperlich 1961 and Kinzelbach 2012 (*non vidi*). Further on the Marisa tomb: Kloner and Braun 2000; Meyboom 2011.

²⁴ Peters and Thiersch 1905: pl. 14; Jacobson *et al.* 2007: 26 fig. 11, bottom.

²⁵ Peters and Thiersch 1905: 27–8. Discussion in Jacobson *et al.* 2007: 34 no. 15. Note Aristotle, *History of Animals* 2.1 (499b 20), mentions a ‘hippelaphos’ – a creature with antlers (two of them) like a gazelle. This has been linked with various animals including the Saumer Deer and Nilghai (*boselaphos*) of northern India. Leonhard 1915: 255, notes that a creature known in antiquity as the *tragelaphos* (see e.g. Pliny *NH* 8.50) might be equated with the Wisent (Bison) that he sees in the bovine form of the Kalekapı animal. Others, equating the *tragelaphos* with Aristotle’s *hippelaphos*, have proposed that both names can be equated with stags of north India. The name *tragelaphos* is now used for a genus of antelope-like bovines.

²⁶ One is reminded here again of Strabo’s (15.1.56) citation of Megasthenes on “horses with one horn and the head of a deer (μονοκέρατος ἑλαφοκράνους)” already noted in n. 17, above. Note that Pliny’s *monoceros*, described above (p. 4), is said to have the head of a stag.

²⁷ These are not distinguished by Lavers 1999: 341–3.

nose.²⁸ Rather the opposite to the Marisa painting, where a rhinoceros was used as a model for some other imagined creature, von Gall felt that the Cypriot jug could represent an attempt to depict a rhinoceros by a potter who had no actual experience of such a creature, and who therefore modeled it with a bovine body.²⁹ Such a warped idea of a rhinoceros could in turn, he proposed, be what the sculptors at Kalekapı were aiming for. The 'horn' of the Cypriot jug, though, may be a loop for a nose ring, the figure simply depicting a bull.³⁰

It has been suggested in the past that the idea of the unicorn as distinct from a rhinoceros could have stemmed from an ancient misunderstanding of bovines shown in profile in Near Eastern art.³¹ One example might be the aurochs shown in procession on the Ishtar Gate from Babylon, now displayed in the Pergamon Museum in Berlin. This derivation may already be incorrect, but here it is also important to note that the horns of those creatures are curved and tapered, unlike the very straight line in the Kalekapı relief.

Something more clearly a 'unicorn' of a unique type, which could be linked to Aristotle's one-horned oryx, is represented by a small bronze said to be from Iran and dated to the 9th or 8th century BC.³² The figure is a goat-like creature with a large, long horn protruding from its nose. Again, the horn is clearly just that, and is shown curving up and back over the head of the figure and tapering toward its end.

There are more robust traditions of bovine (goat) and equine unicorns in the art and literature of India itself, especially of the medieval period, which may well have been related to older Mesopotamian and Iranian traditions, and which contributed to the more familiar medieval Western idea of the creature.³³ It has been proposed that the dissemination of ideas about such creatures could have been a phenomenon of the Achaemenid Empire, which encompassed vast territory stretching from modern Pakistan to Western Turkey.³⁴

Ctesias's book on India is evidence enough that this did occur, to some extent. Despite that, however, on balance there are good reasons to reject the idea that the Kalekapı figure was intended to depict a unicorn. In the first place, fabulous beasts flourished in the art of the Achaemenid Empire, but they usually belong to certain groups, especially *winged* beasts (*pegasoi*, winged bulls, winged lion griffins, griffins, sirens and sphinxes). The above-described depictions of one-horned creatures, including rhinos, are rare and, as far as is known were not part of an attested Achaemenid period visual tradition. Although the literary evidence shows that such a creature was imagined, therefore, there is not good support outside of the Kalekapı relief itself for the depiction of unicorns as subject matter at the time it was made. This makes it not impossible, but *improbable* that such a creature is what was intended in that particular relief.

Secondly, although Pliny speaks later of a unicorned ox, there is little other support for the envisioning of unicorns as oxen-like, either in Ctesias or in the rare images of one-horned beasts that are known. Thirdly, particularly important, is the shape of the horn; in no cases of the depictions of rhinoceroses or the more mysterious one-horned animals (for example the small bronze goat noted above) is the horn shown as a straight bar, as it is in the Kalekapı relief. Unlike that straight, diagonal line, they are all shown curving and tapering – clearly articulated as horns.

Fourthly, the Kalekapı figure is, as most commentators have acknowledged whether or not they identify a unicorn, unfinished. While the right side, around the body of the creature, has been removed more thoroughly, the point chisel or pick marks clear, the area on the lower left, near the head of the figure, has not been removed (Fig. 7). As noted above, the surface of the figure itself has been left with the same right to left diagonal tool marks that were used to trim the cliff face. The silhouette of the body, as also widely acknowledged, is very similar to that of the *finished* relief of what is clearly a bull on the other side of the tomb (see Figs 3 and 4, and 8 below).

The Kalekapı tomb is remarkably lavish in its decoration, but given these factors it is more probable that the intention here was to include another bull among its set of reliefs than that the decoration extended to including – indeed

²⁸ Base ring ware bull figurine jug, Late Cypriot II date: von Gall 1966: 37; Perrot *et al.* 1885: 693–5 fig. 502.

²⁹ Cf. Gombrich 1977: 70–72 on the processes of seeing, knowing and making which resulted in Durer's misrepresentation of a rhinoceros (I thank Professor Richard Read for pointing this out to me).

³⁰ I thank Thomas Kiely of the British Museum for information on this figure.

³¹ Schrader 1892, as cited by Leonhard 1915: 254–5; von Gall 1966: 36.

³² von Gall 1966: 36; bronze 'Einhorn': Tehren, Foroughi Collection, h. 7.4 cm, l. 6.5 cm in *7000 Jahre Kunst in Iran* 1962: 60 no. 65.

³³ See the refs in n. 12, above.

³⁴ Summerer and von Kienlin 2010.

inventing – a very exceptional image of a unicorn, almost a unique 'illustration' of Ctesias' writings. Given this, one is obliged to consider other explanations for the strange 'horn'.

An alternative: a diagonal guideline

The unfinished relief or 'unicorn' relief (Fig. 7) shows in profile a bovine body, resembling in shape the larger bull shown in low relief at a slightly higher level on the opposite side of the tomb's porch, although with a variant gait: one forefoot is shown slightly lifted in front of the creature as though the animal were striding rather than pawing the ground, and a rear foot is lifted (see Figs. 4 and 8). The creature is contained in a rectangular frame within which the background has been partly removed with a point chisel or pick. As noted above, the body of the figure itself was not detailed with any contouring or incision, its surface being left with the top right to lower left diagonal tool marks from the initial trimming of the cliff face (Fig. 7). There was complete removal of the background on the right side of the relief field, around the body of the creature and along neatly cut framing edges, with additional removal of the top right edge of the frame where the tail of the creature, shown curved up and overhanging its rump, overlapped it. The left edge of the relief field is only indicated by the top left corner where background was removed; the background was not removed at all in the middle to bottom left. It is notable that the body of the creature does not take up the full width of the relief field, but leaves space at the left end – a point to be returned to, below. It is on this left side, in the upper corner, that one finds the long diagonal line – the so-called horn – extending between the top left corner to the head of the beast.

As noted above, most scholars have recognized that the creature shown should be identified as a bovine and that the relief is unfinished. Bittel and more recently Johnson, however, have asserted that the long, diagonal 'horn' should be understood as a raised relief line from which the carver(s) were working while removing the background.³⁵ The points enumerated above stressing the improbability of the depiction of a unicorn support this identification. In particular, as already noted, the diagonal line is oddly straight for a horn. Although in von Gall's drawing (see Fig. 4) it appears to taper toward its top, photographs (Fig. 7) indicate that it does not.³⁶ What is even more suspicious, and needs to be stressed, is that the line runs directly to the corner of the pictorial field, and at an angle which means that if followed to the lower right it cuts the whole relief field in half diagonally (Fig. 8).

While convinced that the long diagonal line was a horn, von Gall did question whether other protuberances from the head of the beast should also represent horns, making it a *tricerus* rather than *monoceros*.³⁷ The shape of the protuberance above the head of the beast, to the right of the diagonal line, is much more convincingly a curving, tapering horn. On the left side of the head are two protrusions identified as a mouth by some, which could be, however, the silhouette of another horn and an ear. One can imaginatively plot in between these outlines a plan of a bull's head turned in a manner similar to the bull in the finished relief (Fig. 8, bottom). The position of the head would not be quite the same as that of the other bull; it would be shown lowered and tucked into the chest in a more exaggerated way. This positioning may be significant, but it is not so awkward that it undermines the likelihood that the figure was intended to represent a bull similar to that on the left side of the tomb. (Indeed it could be said that such a pose is rather sophisticated.) A bull figure would form, as others have remarked, a kind of pendant to the bull on the other side, although with variation in pose and size as well as position lower on the tomb façade.³⁸

The fact that the outline of the head of the creature in the unfinished relief can be reconstructed as that of a bull roughly similar to the bull in the other finished relief and the suspicious straightness and angle of the diagonal relief line allows one to infer that rather than a long horn it may be a mark external to the iconography, potentially a remnant of production. The idea that it is a diagonal guideline, however, is also problematic. The use of diagonals in composing two and three-dimensional works of art is not unusual; diagonal compositional guides would have been

³⁵ Bittel and Naumann 1965: 75–6, argue this specifically: "was Leonhard für das Horn des Tieres hielt, ist in Wirklichkeit ein während des Arbeitsvorganges stehengebliebener, schmaler, Relief und Rand verbindender Steg, auf den der Bildhauer von beiden Seiten beim Admeisseln des Grundes der Bildfläche zugearbeitet, den er aber dann nicht mehr entfernt hat... Es hat allen Anschein, als ob hier ein Kopist am Werke gewesen wäre, der sich, von dem Stier links inspiriert, versucht hat, ohne dass ihm sein Werk zu Ende zu führen und es auf der linken Seite durch ein Pendant zu komplettieren verstatet war." Cf. Johnson 2010, as in n. 1, above.

³⁶ Good photographs in von Gall 1966: pl. 3.2; Summerer and von Kienlin 2010: 198 fig. 3. Leonhard's drawing also shows no tapering: Leonhard 1915: fig. 85.

³⁷ See n. 8, above. Leonhard had seen two 'normal' bull horns, as his drawing shows (see n. 36, above). Bittel corrected this, noting that there is only one bull horn: Bittel and Naumann 1965: 75.

³⁸ See n. 35, above.

needed in the carving of column capitals and for complicated designs, and it is well known that employment of such axes can impart a rich dynamism in images. Traces of them, though, are very rare, probably because they were usually only sketched on or lightly incised during planning, and removed very early on in the roughing out process.³⁹

There is a possibility that diagonal lines were used in designing at least parts of this tomb's reliefs. Although the positioning of the figures is not utterly strict, it does obey a very basic symmetry, which may have entailed the sketching out of a rough grid before outlining the figures.⁴⁰ The above-noted Herakles figure's leg is shown extending to the corner of the porch entrance (Fig. 4). The intensity of the diagonal of that figure's leg suggests that diagonal guidelines were used in the planning of that figure. There are diagonals through other parts of the composition, and it is possible that diagonal lines could have been used to plot out some other figures, or parts of them. They could even have been used to plot out the bulls; if one draws diagonal lines through both bull figures they show roughly similar positioning of the body in relation to such lines – except for the head (Fig. 8).

If diagonals were used in the planning of parts of the reliefs, this could have influenced the use of a diagonal guideline in the case of the unfinished bull. What is problematic, as von Gall had pointed out in his objections to Bittel's solution, is it having been left as a raised relief line.⁴¹ As noted above, one would rather imagine that diagonal lines would be lightly incised through the rectangular pictorial field and then the outline of the animal sketched in, after which the background would be trimmed away around the animal. There would be no need, then, to leave any line standing proud. This suggests abnormal methods, and so rather than a remnant of what might be a common centering device, the relief diagonal line here may in fact have been an erroneous method specific to unskilled carving of this relief, or a part of it.

Bittel proposed that an inexperienced carver attempted to copy the bull on the left side of the tomb.⁴² I would like here to propose that there may have been at least two hands involved – a more and a less competent carver. Although only in outline, the profile bovine body is itself elegantly shaped, suggesting that it was sketched in outline and at some point the background removed with some level of competence. The sculptor(s) seem to have encountered difficulties, however, in positioning the head. As noted above, the head of the bull may have been planned to be shown turned in the manner of the other bull shown in the finished relief, but with some differences. In the case of the finished bull only one horn is shown extending beyond the edge of the body (Fig. 8, top). The other, as well as the ear, is shown through incision as overlapping the shoulder of the bull. The head is shown in three quarter position. In the case of the unfinished figure (Fig. 8, bottom), both horns would be shown protruding in silhouette and this suggests that the head would have been twisted into a more frontal position and tucked into the chest in a more exaggerated fashion.

This positioning of the head is not necessarily incompetent in and of itself. As noted above, some might argue it was an attempt at a more vigorous pose. It may, however, be entangled with oddities of the left side of the relief, including the diagonal line. One might ask why the figure as a whole is positioned to the right of the relief field, with a gap on the left. The position of the relief, lower than the level of the entrance to the porch of the tomb (Figs. 3 and 4) could encourage speculation that this unfinished relief was intended as part of a longer frieze running under the tomb's porch. But even if this were so, this would not explain the diagonal line. It is highly unlikely that there was an intention to show a figure thrusting a spear into the bull. In the first place, such iconography would be unusual, boar and deer, sometimes big cats and bears being the more usual hunting quarry in this period.⁴³ Even if one pressed the point that bovines could have had a special role in this area (as their appearance on this tomb seems in fact to suggest), the likelihood of a rare bull hunting depiction is not supported by any indication of planning for such a hunter figure. The unfinished left side of the relief may be badly planned in general, but one need not imagine that there was an original plan for a hunter figure on the left, which never got finished due to mistakes in carving the composition.

³⁹ On carving techniques, besides the *Art of Making* website on which this essay is published (www.artofmaking.ac.uk) and specifically the essay Wootton *et al.* 2013 on it, see Rockwell 1993 (available online through the *Art of Making* website) and Palagia 2006. Literature on guidelines in ancient carving is, however, generally very rare, and I have not been able to find any references specifically to diagonal guidelines.

⁴⁰ For discussion of the process of making with reference to tacit knowledge in planning of compositions and in drawing, and to the theories of Antony Giddens, see Johnson 2010: 202–7.

⁴¹ von Gall 1966: 18 n. 8.

⁴² Bittel and Naumann 1965: 75–6 specifically associates the line with 'inexperienced' sculpting (von weniger geübter Hand). See n. 35, above. Cf. Johnson 2010: 205, who suggests that the normal method of incising the outline and interior details before trimming the background was not followed.

⁴³ Ancient hunting imagery, *inter alia*: Schauenburg 1969; Anderson 1985; Andrae 1985; Schnapp 1997; Barringer 2001; Fornasier 2001; Nollé 2001; Seyer 2007.

Another explanation for the spacing and the diagonal line make them both part of a sequence of erroneous steps stemming from the carving of the frame. The finished bull on the left side of the tomb's façade is shown on an even, straight ground line, but there is no real frame – or at least not a frame that was carved. The background seems to have been carved away freely, from the animal out, until an arching line was created. The more sharply defined frame of the unfinished relief suggests that the frame was the first element plotted out and one would imagine that then the bull figure would have been outlined within the confines of this frame. The lion relief above the unfinished bull (Figs. 3–5) seems to have been plotted out within a pre-set frame in this manner. Aspects of the unfinished bull's composition, however, suggest that this was not the case for that relief – or at least not entirely the case. The frame, as will be explained below, may have evolved with the carving, and led to the problems with the left side.

The initial upper boundary of the bull relief would have been set by the lower ground line of the lion relief, but a framing border separating the two reliefs need not have been part of the original plan. Indeed, it was not maintained around the tail of the bull, where the background was removed entirely. The finish of the bull's rump on the right side of the relief compared to the left side of the relief suggests that the masons worked from right to left, and that upon reaching the part over the back of the bull they/he/she decided that they wanted to maintain a border between the lion relief and their bull. The thick frame line may have been created at that point, then, rather than having been intended from the beginning.⁴⁴

This upper frame line extends along to the left, and it may have been the extension of this line that led to the oddities of the left side of the relief. The point at which the upper line was terminated, setting the upper left corner of the relief field, is not in line with the lower left corner of the lion relief. Nor is it in line with the leftmost extent of the bull. It is somewhere in between the two. One could, at a push, imagine that originally there had been a plan for a head much more in keeping compositionally with that of the other, finished bull relief, which feasibly could have determined the upper framing line's length (Fig. 9). However, there is no trace of any sketched outline that would support such a hypothesis. The implication is that the masons terminated their horizontal framing line at an arbitrary point.

One might object that one of the horns of the bull meets the upper frame and that there is no trace of any incision separating horn from frame which would prove that the masons marked out a horizontal line first, before returning to carve the rest of the bull, including that horn, below it. This raises questions about how compositions were sketched out, whether with very light incision, chalk lines or pecked out with the point chisel. Peri Johnson's close autopsy of the tomb's reliefs indicates that lightly incised lines were used to sketch out the lion griffins in the upper part of the tomb's decoration.⁴⁵ It is possible that a lack of sketching and overreliance on a point chisel may be part of the problems that ensued with the carving of the unfinished bull relief.

Whatever way it was done, that a horizontal upper framing line *was* plotted out before returning to the bull figure below makes more sense of the diagonal line: a left end terminal point of the horizontal framing line being set in this way, the masons would then have felt compelled to work within the frame they found they had created. This hypothesis is supported by the fact that, as stressed above, the angle of the relief diagonal line runs between the top left corner and the lower right corner of this frame, cutting the whole field in half diagonally (Fig. 8, bottom). And this line seems to have been used to locate and plot in the shape of the outline of the bull's head: according to the locations of the two protrusions which ought to be the bull's horns, these were positioned roughly symmetrically on either side of the diagonal line, the line hitting the top of the bull's head, right in the centre of the cranium. Although the general position of the head may have been to some extent marked out previously, then, the diagonal line would have had a central role in determining its position and shape by the time it came to really carving it. The very fact that the diagonal line remains in relief shows that the masons then proceeded to carve not from the outlines of a well-placed head out, but from the diagonal line, from the frame and from the outlines of the head, such as they were, to the middle, effectively concentrating on removing negative spaces of the background.

⁴⁴ This differs from Johnson 2010: 204–5, who sees the frame as having been a first element carved, the part of the frame that the bull's tail overlaps having been removed. The notion tallies, however, with her points (Johnson 2010: 205–6) about adjusting a loose plan as one carves, rather than strictly adhering to a pre-conceived plan.

⁴⁵ Johnson 2010: 204 point 2 on the abandonment of the initial sketched out position of the left side lion griffin.

It is possible that this procedure and reliance on a diagonal guideline was due to an attempt to mirror the bull on the other side of the tomb, the flipped orientation possibly causing some confusion.⁴⁶ But the comparatively elegant outlines of the unfinished bull's body with the awkward outlines and odd carving procedure of the head suggests that there were two phases of carving, with a transfer from a more to a less skilled party. What the nature of this break would have been remains unclear. It seems unlikely that an apprentice usually employed to carve out backgrounds would have been left to outline a tricky part unmonitored, or that someone who had been involved with the carving of the back end of the bull would have turned to such an unorthodox method. Another possibility is that there was a more pronounced break in the making of the relief, with one party carving the body and another party with little knowledge of drawing and carving images employed to complete the left side.

In the end, the relief was never completed, the lower left corner as well as the diagonal line never being removed, and interior details never added. There may be a number of reasons for this. Fissures in the stone through the reliefs could have appeared now; it is notable that one runs to and along the edge of the patch of unremoved stone on the left of the unfinished bull relief (clearly visible in Fig. 7). Other reasons for monuments remaining unfinished include disruptions in the availability of money, skills and labour, and low priority placed on the decorative programme compared to the overall usability of the monument.⁴⁷ Here, though, the project could have been halted because the gap on the left and/or incorrect composition of the bull's head were noticed. Thus, the mistakes that led to its appearance may ultimately be the reason why the mysterious diagonal line remains to this day.

Conclusions and considerations for further research

Overall, as Peri Johnson has stressed in her study of Paphlagonian tombs in their landscapes, seeing the Kalekapi tomb's reliefs as 'provincial', either in a negative or positive sense (saying for instance that they display a local 'vigour') simply judges them according to a preconceived expectation of 'classical' art and obscures not only the ambition the tomb evidences, but the impressive skill employed.⁴⁸ The carvings, although not employing absolutely strict symmetry and showing signs of freehand drawing, were overall placed in a complex yet coherent compositional scheme and display adept finesse in the handling of contour and line.

As suggested by several scholars, the reliefs may not have been carved contemporaneously. It is possible that the other bull and lion, as well as the unfinished bull, were added later than the upper reliefs.⁴⁹ What I suggest here is that, as well, there were two stages in the attempt at the unfinished bull relief. In one stage, the body was rendered in outline, and possibly the background removed, by a relatively skilled worker. This same worker may have been responsible for carving the border between the lion and bull relief that formed a frame for the latter, or this may have been carried out by a different worker or workers. Either way, the head and part of the left side of the bull looks to have been attempted by a new party and, it would seem, an inexperienced one. With seemingly little idea of how to proceed with the carving, they started from an erroneous idea of how the head should be positioned, relying on a diagonal guideline through the relief field to centre it and direct their efforts to cut away the background, unfortunately missing their mark.

This suggests a malfunction in work on the relief and in the availability, or at least employment, of local expertise. One can only speculate on the causes. Concerning the use of diagonal lines, the line left standing proud here might have been encouraged by knowledge that such lines were used to compose the other reliefs on the tomb. If so, the use of diagonals should underscore the skill of the sculptors and their ambition to create lively and dynamic compositions. This particular raised line, though, is not a normal guideline that has simply not been removed. Although it hints at the regular use of such diagonals in compositional methods, it is evidence of erroneous understanding and use of such lines.

⁴⁶ Cf. Johnson 2010: 205 on problems of mirroring in the carving of the lion griffins in the upper levels of the tomb's reliefs.

⁴⁷ See e.g. Blümel 1955: especially 12–13. On this specific instance: Johnson 2010: 206 n. 575. Unfinished work has been explored most in depth for Roman sarcophagi portraits: Huskinson 1998; Smith 2008 and 2012 (who suggests wilful lack of finish on portraits on Roman sarcophagi due to social anxieties about commissioning portraits for tombs while still alive, even amounting to a kind of competitive propriety). For the lack of necessity to achieve 'finish' on sculptures decorating especially rock cut monuments that were practically functional, see Dehejia and Rockwell 2011. One might consider the issue of whether the reliefs were painted and if so, whether the unfinished bull (presumably unpainted) would have been less noticeable in comparison.

⁴⁸ Johnson 2010: especially 196–9 and 203–4. For discussion of apologist views of 'provincial' Romano-British sculpture see Stewart 2010.

⁴⁹ Leonhard 1915: 256; Bittel and Naumann 1965: 76; von Gall 1966: 52–4; Johnson 2010: 202–5.

Otherwise, the identification of this figure as a second bull on this tomb encourages further consideration of bull iconography on this monument, in Paphlagonia and beyond, and its significance for memorialization and landscape marking.⁵⁰ But one might also consider, alongside this, the afterlife of this unfinished relief. The monumental Paphlagonian tombs were very visible and would have attracted attention – especially the highly decorative Kalekapı. As mentioned above, it has been suggested in the past that the idea of the unicorn could have stemmed from Greek misunderstandings of horned creatures rendered in profile in Near Eastern art.⁵¹ Even if that is not exactly the case, one wonders whether the unfinished bull of Kalekapı could have influenced or encouraged later ideas of such creatures, especially considering the unicorn 'ox' of which Pliny speaks. Although there is no evidence for viewer responses to this monument, and while its sway may not have extended beyond Paphlagonia, it at least seems worth considering that just as it has puzzled modern viewers, it may have drawn the attention and discussion of ancient observers too, exerting in this way an unintended but still powerful influence over the world around it.⁵²

Finally, although not the potent horn of a unicorn, the unusual diagonal line in the Kalekapı relief is powerful conduit for focusing attention on issues surrounding the making and meaning of monuments.⁵³ Although difficult to comprehend the exact stages involved, the unfinished bull's distinctive features are clearly a result of the procedures and steps taken in its carving. In this case the procedures are argued to be erroneous, but this still highlights how making methods, processes and procedures affect visual outcomes, which in turn have an impact on viewers and, extending from that, on society. Within Kalekapı itself one can observe different methods of composing and carving: for example the lion above the unfinished bull may have been planned within a preconceived frame while other reliefs were not necessarily. As noted above, sketching may have been used to plot out some figures, but this method may not have been employed for the front of the unfinished bull figure. Further research could expand on this kind of analysis, considering materials, tools, carving technologies, processes and ergonomics, how these relate to larger frameworks of material landscapes, availabilities, economics, connections and social practices, and how these intersected to form particular visual cultures and visual places.⁵⁴ Attention to such aspects in the making of the various rock cut reliefs that are such a prominent part of Anatolia's landscapes has the potential to contribute much to the economic, cultural and art history of a vast and varied land.

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⁵⁰ von Gall 1966: 51–3, suggests family 'coat of arms' or reference to individual qualities; Johnson 2010: 246 suggests a link with the Hittite god Nergal in his sky bull form.

⁵¹ See n. 31, above.

⁵² The power of unfinished sculptures on the imaginations of viewers is often discussed with reference to Michelangelo's Captives in the Galleria dell'Accademia in Florence, but also with large unfinished monuments in landscapes, for example the unfinished sculpture of Crazy Horse in the Black Hills of South Dakota, USA and the Unfinished Church in Bermuda, where the imaginative appeal is similar to that of the ruins of 'finished' work (see Ginsberg 2004). There does not seem to be a developed literature on the impact of the unfinished on imagined landscapes as yet, but provisional literature could include those articles cited in n. 38, above, Vidya Dehejia's forthcoming book on unfinished Indian monuments, and Pateman 1997, on 'space for the imagination.' Tangentially on completeness: Gallagher 2009. Cf. also Johnson 2010: 202 on the mutability of images on tombs in general and Harmanşah 2014a and 2014b on rock carving and place, with attention to the notion of finish in rock cut carvings.

⁵³ Cf. Johnson 2010: 206 on how the 'unfinished' qualities of this tomb's reliefs make the processes involved in carving particularly visible.

⁵⁴ For approaches along these lines see Johnson 2010 and Harmanşah 2014a and 2014b, although they are more concerned with agencies, place making and ongoing interactions with monuments than with economy, tools and techniques specifically. This agenda in general: Lechtman and Merrill 1977.

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Figure 1: View of the Kalekapı Tomb.



Figure 2: View of the landscape below, from the Kalekapı Tomb.

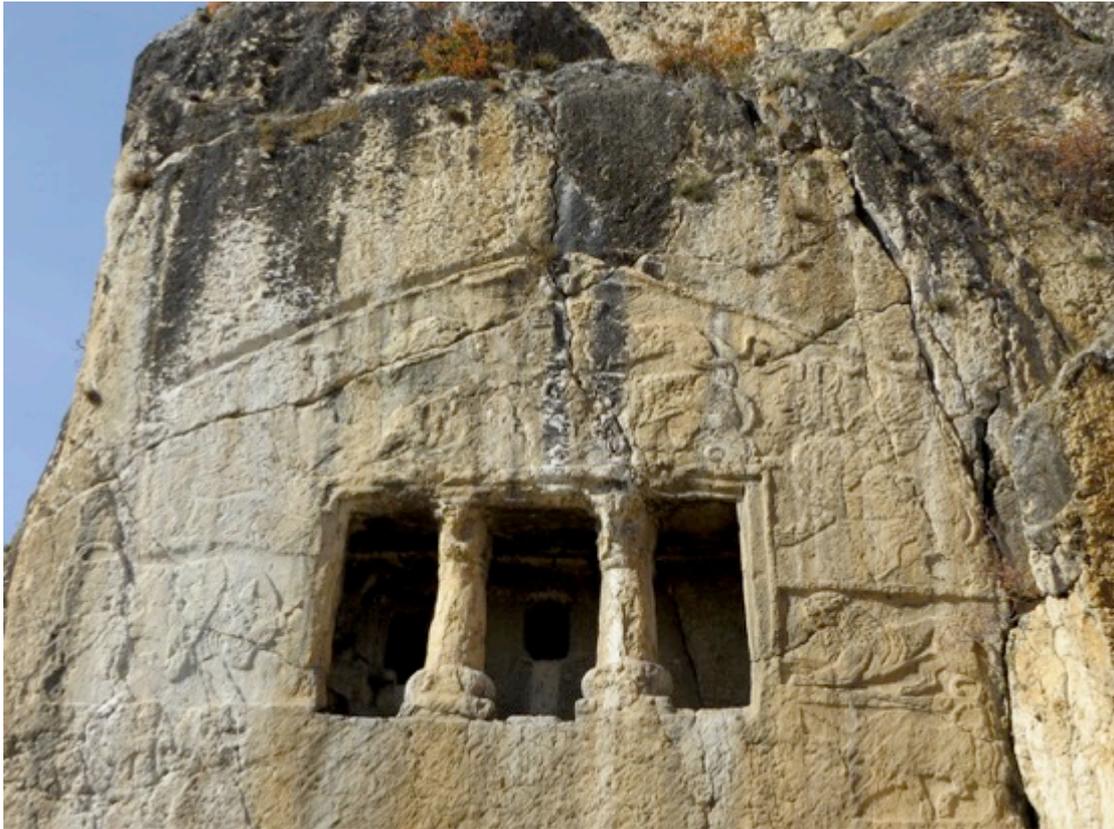


Figure 3: The low relief sculptures surrounding the porch of the Kalekapı Tomb.

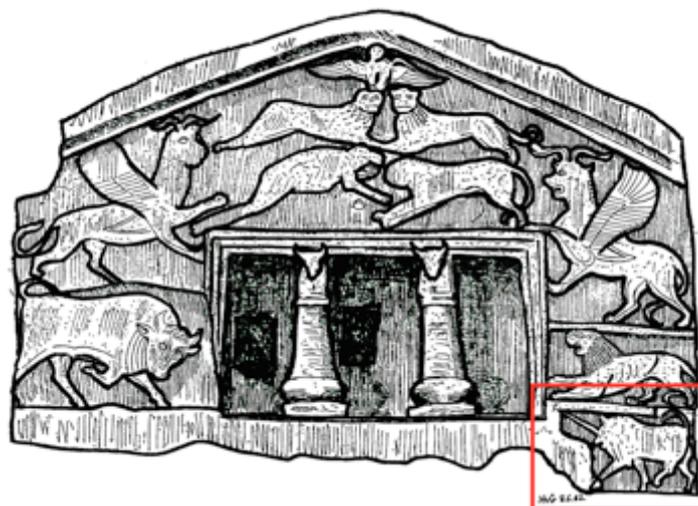


Figure 4: Adjustment of von Gall's drawing of the reliefs on the façade of Kalekapı, including addition of a leg of the man wrestling the lion in the pediment. After von Gall 1966: fig. 1. *NB.* This illustration is intended to provide an impression of the assemblage of the reliefs on the tomb and should not be taken as an accurate recording. *Cf.* more recent and accurate drawings in Summerer and von Kienlin 2010: 199, fig. 4 and especially the drawing from rectified photos in Johnson 2010: 503, fig. 6.



Figure 5: The left side reliefs of lion and unfinished relief (bull/unicorn) below.



Figure 6a



Figure 6b

Paintings in Tomb I at Marisa (Marêshah), south of Jerusalem. On the far left, the 'unicorn'.
Photo by Ian W. Scott (available at <http://www.flickr.com/photos/ian-w-scott/7394060456/> (accessed on 11.01.2015)).
Cf. Peters and Thiersch 1905: pl. 14.



Figure 7: The unfinished relief. *Cf.* von Gall 1966: pl. 3.2.

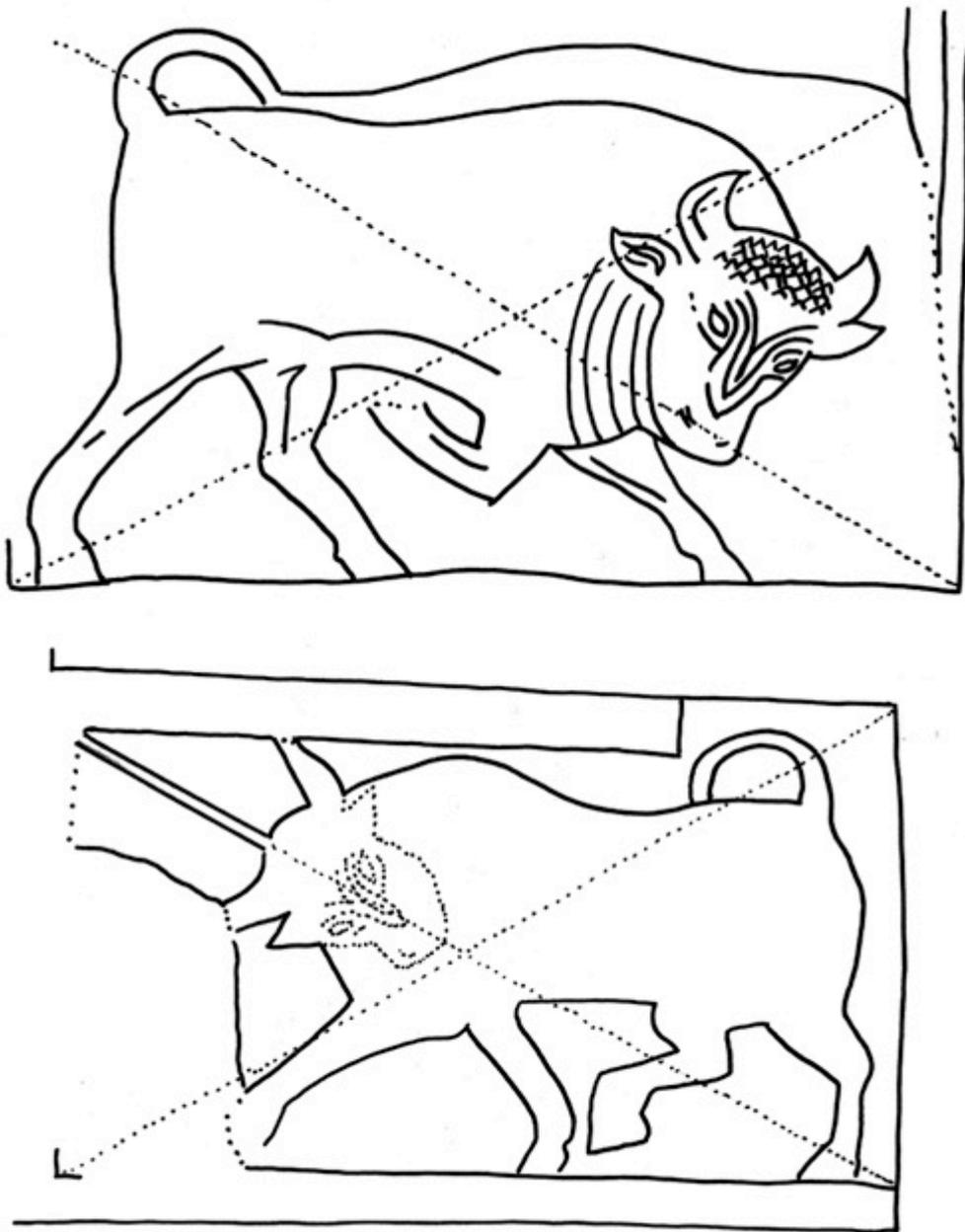


Figure 8: Line drawings traced from drawing and photograph in von Gall 1966 (fig. 1 and pl. 3.2) with additions by author, showing the finished bull from the left side of the tomb (top) and the unfinished relief (bottom), with diagonal lines and restoration of the approximate position of the second bull's face.

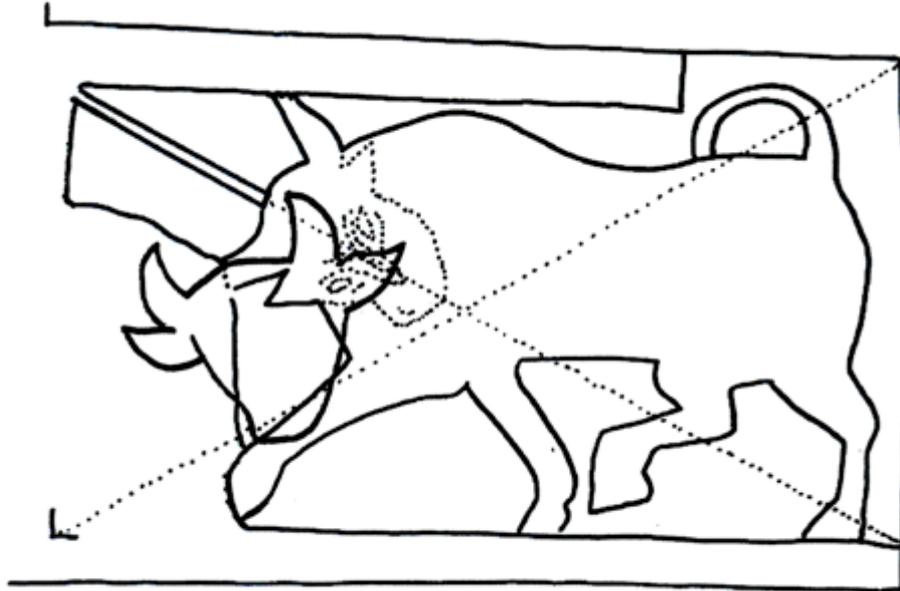


Figure 9: Line drawing traced from drawing and photograph in von Gall 1966 (fig. 1 and pl. 3.2) with additions by author, showing hypothetical placement of the head of the bull in the unfinished bull relief as it could have originally been planned, mirroring more effectively the bull on the left side of the tomb (see Fig. 8). If such a head position had ever been sketched out, there is no trace of it now and it must have been lost by the time the masons came to carve the bull's head, since they opted for an alternative plan, using a diagonal guideline to centre the head, placing it further up and to the right in the composition.