UNIVERSITÀ
DI PAVIA

DIPARTIMENTO DI STUDI UMANISTICI

CORSO DI LAURE MAGISTRALE IN

THE ANCIENT MEDITERRANEAN WORLD:

HISTORY, ARCHAEOLOGY AND ART

Eskiyol:

The Geospatial Analysis of an Extra-Urban Processional Route in Iron Age South-Central Anatolia

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Table of Contents

..... 1

Abstract..... 3

Chapter 1: Introduction..... 4

1.1) Geographical Features of Central Anatolia..... 4

Chapter 2: The Stations of the Route..... 7

2.1) Dikilitaş..... 7

2.2) Keşlik Yayla..... 28

2.3) Tavşantepe 2..... 43

2.4) Tavşantepe 1..... 44

Chapter 3: Geospatial Study of the Route..... 52

3.1) The Visibility Analyses..... 52

3.2) The Watershed Analysis..... 72

3.3) Chapter Conclusion..... 80

Chapter 4: Conclusion/Discussion..... 82

4.1) Interpreting the Results of Watershed Analysis: The Cultic Significance of Drainage Divides in Central Anatolia..... 82

4.2) Final Remarks..... 95

Bibliography..... 95

Abstract

In the Altunhisar Valley of South-Central Anatolia there are a group of stelae representing different cults, which seemingly mark a route that connects the nearby site of Kınık Höyük in the Bor Plain with Northern Anatolia. Dated roughly between 10th and 8th c. BCE, these stelae adorn a path within the Altunhisar Valley that emerges from the northern slopes of the modern village of Yeşilyurt. This 12km route, known to the locals simply as "The Old Road" (Eskiyol), starts with a ridge that opens up to flat pastures, and finally narrows down to a chokepoint in the valley floor right before Melendiz Mountain Range opens up to Northern Anatolian lowlands. Each of these main stages are marked by a prominent stele that has distinct attributes compared to the others. Previously they have been researched on an individual basis, providing insights into different stages of cultic practices that emerged in South-Central Anatolia after the collapse of the Hittite Empire. The aim of this research is to approach these stelae and the route from a holistic perspective in order to grasp their relationship and function as a whole. This will be achieved by providing a comparative formal analysis of these monuments; their spatial distribution across the landscape and spatial relation to each other via various GIS models; and by investigating possible parallels with previously researched monuments or groups of monuments with similar alignment and attributes. The cultic landscape of South-Central Anatolia, especially data coming from the IA - Hellenistic layers of the nearby site Kınık Höyük, and theories on patterns of cultic continuity will also be addressed.

Chapter 1: Introduction

This thesis investigates the cultic significance and function of a series of landscape monuments that adorn a valley and a path that connects two major parts of the Central Anatolian plain. This task will be handled in five major chapters. First chapter will introduce the reader to the broader region during the time of these monuments' construction; providing the necessary environmental and historical framework of South-Central Anatolia. Chapter two is comprised of the formal analysis and the state of research on the monuments that are investigated, on an individual basis. Chapter three is comprised of geospatial analyses, conducted via a combination of QGIS, SAGA GIS and satellite imagery, in order to understand the relation of these landscape monuments with their environment, presenting new data on their functionality that is not discernible by other means. Chapter four investigates the cultic significance of these monuments, in the light of new data provided by the results of the geospatial analyses conducted in the previous chapter. Chapter five is the conclusion.

1.1) Geographical Features of Central Anatolia

Central Anatolia (CA), that constituted the Hittite core region during the 2nd millennium BCE, is a wide basin at an elevation that changes between ca. 600-1100 masl, enclosed by the Köroğlu and Pontus mountain ranges that separate it from the coast of the Black Sea to the north, and the Taurus Mountains that separate it from the Mediterranean to the south. It is characterized by a volcanic geomorphology, large highland plateaus divided by mountain ranges that vary in scale, abundant salt lakes and water outlets with bitter and salty compositions, and closed water basins that only allow the few largest rivers (such as Kızılırmak, Sakarya, Yeşilırmak, Seyhan) to exit the encircling mountain ranges and reach the sea. (Alagöz 1968; Özçağlar 1968). The bitter/salty composition of the water

sources is the result of the volcanic geomorphology that tends to heavily alter the chemical composition by introducing high levels of sodium and sulfate, among other elements.

The climate of CA is characterized by harsh, cold winters; convectional rains during spring and early summer; and a dry heat during summer and early fall (Özçağlar 1968, 143–44), with certain areas near proximity of significant mountain ranges showing a slightly wetter step-margin character (Matessi et al. 2019, 117–20). Due to this climate and the aforementioned geomorphology, the agricultural activity in the Anatolian Plain is akin to an oasis model; with smaller, disconnected hubs emerging around available water sources (Özçağlar 1968, 144).[1]

Central Anatolian Plain is divided into North-Central Anatolia (NCA) and South-Central Anatolia (SCA). The latter mainly consists of a series of volcanoes (Cappadocia volcanic region) that cut the plain in the middle to the south of Kızılırmak River, on a E-W axis. The major components of these are, from west to east, the Hasandağ, the Keçiboyduran Dağları, and the Melendiz Dağları. Further northwest of the Hasandağ is the Tuz Gölü (Salt Lake). To the south the area is defined by two major plains: the Konya-Karaman Plain to the west, and the Bor-Ereğli Plain to the east. In between these plains is the relatively minor mountain range of Karacadağ with a NE-SW alignment, acting as a divide between these two regions.

The flat basin in between the Hasandağ-Keçiboyduran-Melendiz Mountains to the north, the Tauros to the south, the Niğde Massif to the east, and the Karacadağ range to the west is known as the Bor Plain. Access to the plain from the south is only possible via a narrow pass between the Tauros mountains, known in antiquity as the Cilician Gates, connecting Cilicia with Central Anatolia which are otherwise divided by the Tauros. The connection to Konya-Karaman to the west is possible via flat

[1] This isolated farming pattern is very similar to the one in Eastern Anatolia, albeit for opposite reasons: As CA is characterized by abundant arable land and scarcity of water, the area to its east is characterised by abundant water and lack of arable farming space (Özçağlar 1968, 144). Both of these effects are caused by the mountainous terrain of Eastern Anatolia, providing an increased amount of precipitation due to higher elevations, while at the same time forcing the agricultural activity into smaller, fertile openings in between the mountain ranges. The plain of Elbistan is one such place in ECA, that is relevant for the topic of this thesis. See Ch.3 and Ch.4 for further details.

corridors to the north and south of Karacadağ range. Access from the north of the plain is handled in antiquity and today by 3 main trajectories (Matessi, Dalkılıç, and d'Alfonso 2018; Matessi 2021). The most prominent one is through the wide corridor in between the Melendiz and the Niğde Massif located NE of the plain, where the modern city of Niğde is located. Alternatively, access to NCA is also possible around the slopes of Hasandağ, either via the vast open area to its west, or the narrower pass that is to its east between it and Keçiboyduran (Matessi, Dalkılıç, and d'Alfonso 2018, 1109–10).The third and smallest point of access to north is the subject of this thesis, and it is provided by a narrow valley located in between Keçiboyduran and Melendiz. Currently known as the Altunhisar Valley, this elevated valley is characterized by a high summer pasture (in Turkish, "yayla") divided into parts by mountain ridges and surrounded by peaks. with streams that emerge from them flowing through the valley southward onto the plain. It is seasonally frequented by herders of the nearby villages, mainly from Yeşilyurt and Altunhisar, as well as herders and beekeepers from distant areas (Muğla, Mersin) to whom pasture space is rented by the villages of Yeşilyurt and Altunhisar. Whether this pattern of long-distance frequentation of the pastures is recent or ancient is difficult to say. Movement of people between west Cilicia (Mersin and Tarsus) and the Bor region is historically well attested at least from the Middle Ages (**Maner, d'Alfonso**).

Chapter 2: The Stations of the Route

2.1) Dikilitaş

At an elevation of 1472m asl Dikilitaş emerges on the bedrock on a raised platform adjacent to the rock-carved route; at a prominent position overlooking the initial part of the route, the southernmost portion of the Altunhisar Valley, and the Bor Plain below.

The monument consists of an aniconic stele and a stepped base with a platform directly cut in the bedrock (fig.1) Due to treasure hunters, today the stele of the monument lies broken in three major pieces (fig.2). It was found however as a monolith by previous researchers (see below), so that its original shape and dimension is described here as appeared in the literature. The stele itself is 150 cm tall and 75 cm wide with a thickness of 25 cm. When in position, the wider faces of the stele are oriented in a N-S direction, in alignment with the view of the travelers who would use the route in either direction (fig.3). The top part curves towards east, seemingly marking the position of Kınık Höyük in the landscape when approached from north, and when approached from south it appears under a prominent peak (see fig.1) in the Melendiz Mountains. This peak gives birth to various springs, one of which appears on the eastern side of the elevated ridgeline upon which this monument is located.

The rectangular base cut into the bedrock consists of two steps. The surface of the second step acts as the top of the platform where the socket for the stele is located. The base is well preserved except for the southern side that is damaged and broken, especially in the SW corner. Also on the southern side of the complex there is an additional platform that is smaller and ca. 30 cm lower than the main platform. The entire base measures ca. 4m on the long side and ca. 3m on the short side. In total 11 circular depressions of various sizes are recorded: 10 of them are on the second step (platform) around the stele socket in groups of two, each with a ca. 10 cm diameter; and a larger singular depression of ca. 60 cm diameter is located at the center of the additional lower platform to the south.

The complex was initially discovered in a survey by Aykut Çınaroğlu in 1986. At the time of discovery the stele was found laying on the route adjacent to the base (see **fig?** for the plan and the position of the stele as it is discovered). Çınaroğlu has proposed that the valley, alongside its cultic significance, was in use as an Iron Age quarry; and this stele was an unfinished one, set next to its socket to be worked on and never completed. In order to confirm the base and the stele belonged together, he erected it in its socket on the base, which was in place until it was dislocated recently as mentioned.*fig* Whether the top curvature of the stele is intentionally directed towards the mountain peak, or if Çınaroğlu has re-installed the stele in the originally intended direction, or if this curvature is due to the unfinished nature of the stele are open questions. The depressions on the base are interpreted as libation holes by Çınaroğlu in the same publication (1986), and he dated the stele complex to the MIA.

The freshly broken section has allowed for a preliminary analysis of the material: "The bedrock appears to be compatible with pyroclastic flows (ignimbrites) with centimetric clasts (**fig**), characterized by evident stratification and a relatively acidic composition (likely rhyolitic, as seen in **fig?**; fresh fractures exhibit a typical white/rosy color). Although the stele could be of volcanic origin, it has porphyritic texture and of a different lithology; this is not excluding the possibility of it originating from areas of the bedrock marked in **fig** and **fig**. Furthermore, the freshly broken section creates another possibility for identifying the stele as a metamorphic rock, possibly gneiss, based on the mineral orientation and elongation."[2]. Although preliminary, the analysis indicates that the material is regional, possibly even local, but stele is not likely not cut from the same bedrock it is found upon (**fig**).

The Iron Age dating of Çınaroğlu is not supported by the surface finds from the field survey conducted in 2007 by the University of Pavia: The survey has yielded only a limited amount of surface material, which are dated to Middle Ages (d'Alfonso and Mora 2009, 647). They have identified the rock-cut structures surrounding the stele as medieval, similar to the ones found broadly in Anatolia and the valley itself, demonstrating the continuous use of the road during later periods.

[2] Many thanks to Matteo Giovanni Foletti; personal communication via email, 05.03.2024.

The monument appears in more recent literature mainly by its relation to other monuments of the Altunhisar Valley, and of SCA in general; and its most distinct aspect, the stepped basement, is the center focus in arguments regarding its dating and origin. Step monuments are a phenomenon widely associated with Phrygian monumental tradition, geographically clustering around the Phrygian heartland Sakarya-Eskişehir (referred to as West-Central Anatolia henceforth). The step monuments of SCA are either considered as the result of a diffusion from WCA roughly corresponding to the height of the Phrygian Kingdom (9th-8th c.), or an earlier feature that was present locally in both regions. Aside from Dikilitaş, there are two other known step monuments of SCA, namely the step monument of Ivriz r.2 and the step monument of Kızıldağ.

The dating of Kızıldağ step monument is tied to the inscription KIZILDAĞ-4 that is located adjacent to it. The dating of this inscription is contested. Briefly put, there are suggestions for a revision of the 12th c. dating in favor of an 8th c. date. For the established 12th c. dating see Hawkins (2000, 434) and Hawkins and Weeden (2021) with literature; for the arguments proposing a later date see Massa and Osborne (2022) with further literature. Massa and Osborne consider the monument to be contemporaneous with the inscription (2024, 53–54), therefore date both around 8th c. BCE. Furthermore, they associate the appearance of a Phrygian style step monument in conjunction with a HL inscription as a continued aspect of the highly syncretic nature of the BA Hittite religion, which they argue to have manifested itself also in other aforementioned step monuments of SCA: Examining the widespread use of stelae during the Iron Age, particularly in eastern Anatolia, they propose that the practice was one that directly descended from BA religious traditions, specifically the stone monuments referred as "huwasi" in Hittite texts. Consequently, they reconstruct not only Kızıldağ, but also the other step monuments incorporating a stele or a stele socket in central parts of Anatolia (Dikilitaş and Ivriz r.2 of SCA, Kerkenes of NCA) as the result of an overlap, a cultural convergence of two contemporaneous IA traditions from western and eastern Anatolia; the step monuments associated with the newcomers known as Phrygians centered in the west, the stelae associated with a continuity of BA cultic practices attested more strongly in the east.

Apart from the contested dating of KIZILDAĞ-4 and its associated monument based on aforementioned paleographic grounds, the Ivriz r.2 also provides elements for an earlier dating, which convolute these ideas of a fusion between IA traditions. Even though it is not part of the "Old Way", this monument will be detailed here because it is extremely relevant for this thesis as it is related to all of the monuments of Altunhisar Valley in differing ways, and will be a point of reference moving forward.

Ivriz r.2 consists of a stepped platform with a rectangular depression, and the adjacent rock relief of two individuals carved in profile, leading an animal on towards the step monument and the depression that is either a stele socket or a libation hole (Bier 1976; d'Alfonso 2020b; 2020a; Maner 2016). The top part of the first figure is broken and only his foot-length tunic is discernible. The second figure is depicted behind the animal with his hands on the hind and head (possibly the horn) of the animal, leading it onwards. The monument is located to the south of Ereğli, on the same spring of Ambar Deresi in proximity (c. 100 meters) of the famed late 8th c. relief of the Storm God of the Vineyard and Warpalawas (IVRIZ 1).

The type of animal that is being led is not clear. Bier argues that while the proportions and the general outline of the body and posture is indicative of a horse, the protrusion by which the animal is held perfectly resembles a double-curved horn of a bull (Bier 1976, 119–20). Maner proposes a sheep (2016, 249). Even though bulls are common offerings, bull tails end with a tuft, and they are consistently depicted in this manner: MALATYA 8, CEKKE, the bulls adorning the base of Çineköy statue, the reliefs on Karkamış Herald's Wall are but a few examples of bull depictions with a narrow tail that only expands at the very end. There are other bull depictions with completely narrow tails with no widening (the reliefs along the northern wall of the cella in the temple of the Storm-god in Aleppo, the bull-shaped statue bases from Domuztepe), but in those cases the "tuft" has added engravings that differentiate it from the rest of the tail. I am unable to find any bull depictions in both BA and IA contexts with such voluminous tails as attested in Ivriz r.2, which is expected since bull tails are not like this in nature. In contrast, the type of tail that is depicted on the relief is characteristic of horses, and to a certain extent, of some sub-species of sheep classified with "fat-tails" (see Gootwine 2018 for different

sheep depictions from a wide range of contexts in Near East throughout antiquity, including examples of fat-tailed sheep that can be similar to the animal found on Ivriz r.2). The tail depicted on Ivriz r.2 is immediately thicker starting from the root, and gets proportionately wider as it continues. The horses that are attested in other post-Hittite contexts such as MALATYA 1, MALATYA 3, Zincirli orthostats from Southern City Gate and Outer Citadel Gate's West Wing, and the Karkamış Long Wall of Sculpture are all depicted with narrow tails that are admittedly dissimilar to the voluminous depiction of Ivriz r.2. However, all of these are of military contexts (all chariots except for a single cavalry from Zincirli) and braiding horse tails in military contexts for functionality (such as avoiding entanglement in the heat of combat) is a well-known feature of equestrian warfare. See particularly Karkamış Long Wall of Sculpture, or the lion hunt orthostat from Sakçagözü (B/1) (figx?orthman71,tafel51c) for the tuft-like detailed tips at the end of narrow tails of the horses adorned in full combat gear. The braiding explains the existence of these pronounced tips, which do not naturally occur otherwise. As Ivriz r.2. is an offering/libation scene, the animal here is depicted with a well-groomed, loose and luxuriant tail worthy of a sacrifice; instead of a braided narrow tail since functionality is not relevant in this particular context. Rare as it may be, there is one other monument from SCA including a horse as part of the composition in a similar offering context, which is TAVŞANTEPE 2. Also worth mentioning, part of a relief with a leg of a horse was discovered during the fourth season of Konya-Ereğli Survey in Ovacık, in an area that is still known for bands of wild horses roaming its vicinity (Maner 2017, 110). Considering the importance of horses in Cappadocia throughout antiquity (Balza 2013), the selection of horse as an offering in this area may find meaning. As far as the other alternative goes, the possibility of this animal being a fat-tailed sheep is reduced by the protrusion on the head: as although animals being led by their horns are much more common, this "horn" is shaped like a bull horn with a double-curve, yet the tail is clearly not of a bovine. In that case this feature must be an ear, as it cannot be the horn of a grown ram with spiral or curved horns, or even a younger ram that is in the process of growing a fully formed spiral, since their horns grow backward and downward, and do not reach this height and forward protrusion before curving. As far as ears go, horse ears can be characterized as perky, upright and tapered, fitting with the depiction. Sheep ears on the other hand either hang downward or extend sideways, with slightly rounded or flat tips. For these

reasons, coupled with the initial arguments of Bier regarding the body shape and posture, I am of the opinion that this animal is a horse rather than a sheep or a bull.

Regardless of the type of animal, the relief differs significantly from what is produced in the region during late 8th c. (dalfonso2020), based on style (a low relief lacking Assyrianizing elements, differing from the others of late 8thc.) and subject matter (offering scene). Although Bier has suggested an earlier dating (Bier 1976) based on iconographical grounds, the dates of the reliefs he chose as comparanda for Ivriz r.2 (located at the Lion gate at Malatya-Arslantepe and the Watergate at Karkamış) were not well understood at the time. As a result, the proximity of other late 8thc. monuments has caused them to be dated together. Additionally, Aro has argued that the lack of archaeological evidence indicates an absence of political formations capable of producing monumental art in SCA before 8th c. BCE. The stylistic differences between this monument and the other late 8thc. monuments, particularly the lack of Assyrianizing elements, were explained by this monument being the product of a different workshop that was active during the time.

Now that the dating of these reliefs are better understood, d'Alfonso raises arguments for an earlier dating of this monument, which is in support of the original publication of Bier: Firstly, comparing the offering scenes of Malatya and Karkamış with the earlier scenes from BA Alacahöyük, he points out the similarities between Ivriz r.2 and the later scenes that are now dated to 12th-11th c. BCE (d'Alfonso 2020, 86-88; with literature). He argues that the iconographical line of reasoning brought up by Bier has not been contested, and the activity of different contemporaneous workshops does not explain neither the lack of Assyrianizing elements nor the difference in iconography; since on top of the stylistic differences, the workshop that has produced Ivriz r.2 has not produced any monument that deals with the same subjects of late 8thc. Tuwanuwan monuments, and vice versa. If this workshop has produced other monuments, the closest candidates are the monuments of TAVŞANTEPE 1 and 2, which not only deal with the same subject matter in a similar style, but also are dated to an earlier period (detailed in the upcoming chapters). Lastly, he points out the recent archaeological developments, particularly evidence from Kınık Höyük, demonstrating the existence of a large urban center with features that indicate a complex territorial organization capable of monumental construction efforts (during?).

D'Alfonso argues that the relief and the steps are intrinsically connected, and due to the monument's positioning, the steps could not have been a later addition. Therefore, he comes to the conclusion that the step-monument tradition may represent a broader Anatolian development, attested in both WCA and SCA, which was subsequently adopted and further developed by the newcomers known as the Phrygians.

When making their case regarding the convergence of the eastern and western monument traditions in IA, Massa and Osborne (2024, 50), do not address any of the issues regarding the potential 12th-11th dating of Ivriz r.2, which together with the contested dating of KIZILDAĞ-4 (8th vs. 12th), makes it so that the proposed hybridization pattern cannot be utilized for the purposes of establishing the date of Dikilitaş, since 2 out of the 3 hybrid SCA step monuments have elements that potentially associate them with earlier periods, which together with Kerkenes makes it so that if there was a fusion between step monument and stele traditions in Central Anatolia, as things stand now, its occurrence cannot be narrowed down beyond a time period between 13th and mid 6th c. BCE. Therefore I exclude this line of reasoning for the dating of Dikilitaş.

That being said, unlike the other step monuments of SCA, Dikilitaş lacks apparent features that allows its assignment to an earlier period, aside from the possible earlier date of the similar monuments in the region. d'Alfonso proposes a date in the late 8th century BCE, based on its proximity to KEŞLİK and the likelihood that both were part of the same processional route. There is ample evidence for Phrygian activity and influence in SCA during the 8th c. BCE, attested by the emergence of tumuli, in particular the inventory of Kaynarca (Akkaya 1991); Blackstones of Tyana (Vassileva 2008); the garb of Warpalawas in BOR and IVRİZ 1(Payne 2023, 880–81); Assyrian accounts of Muskean interference in supra-regional politics (Weeden 2023, 982–1001); and references to the Muski in HL inscriptions (TÜRKMEN-KARAHÖYÜK 1). The 2023-24 excavations in Kınık Höyük has revealed pottery fragments with Phrygian inscriptions and local imitations of Phrygian script, which further demonstrates that the Phrygian influence apparent in SCA was attested in Kınık Höyük and its vicinity. Therefore it is plausible that Dikilitaş emerged as a result of similar cultural processes, which

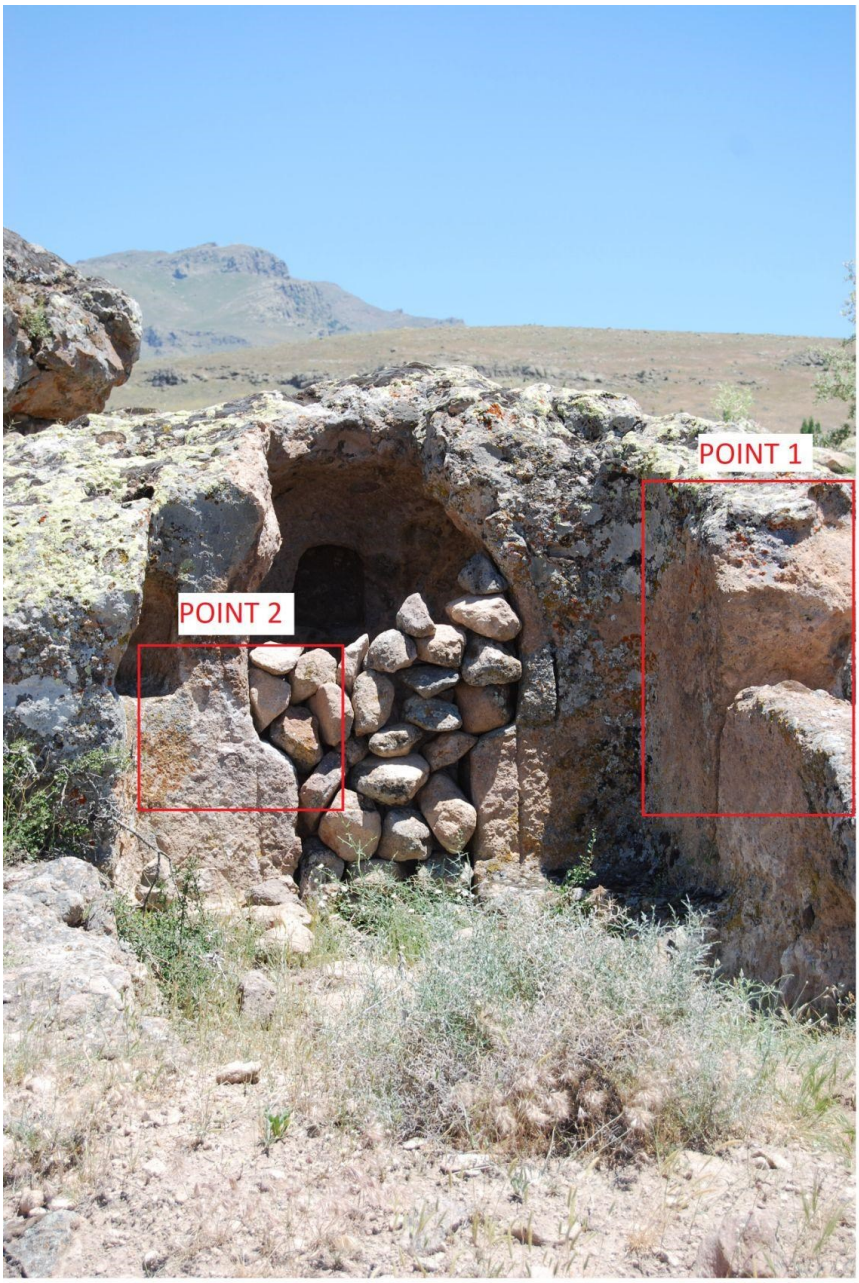
would place the monument closer to 8th c. BCE. GIS analysis conducted in Chapter 3 provides additional arguments for an 8th c. dating.

Fig.1) Dikilitaş Monument from the south. Photo by Kınık Höyük Archaeological Project, 2008.

Fig. 2) The three pieces of the stele in its current state.*Top left*: Stele reclined next to its base with the bottom fracture visible. *Top right*: Stele in the same position, with the side fracture visible. *Bottom left*: The broken base of the stele, joins with the fracture visible in the top left picture. *Bottom right:* A broken piece of the stele, joins with the fracture visible in the top right picture. Photographs by author, 2022.

Fig.3) The road and the stele from south. Kınık Höyük Archaeological Project, 2008


POINT 4
POINT 3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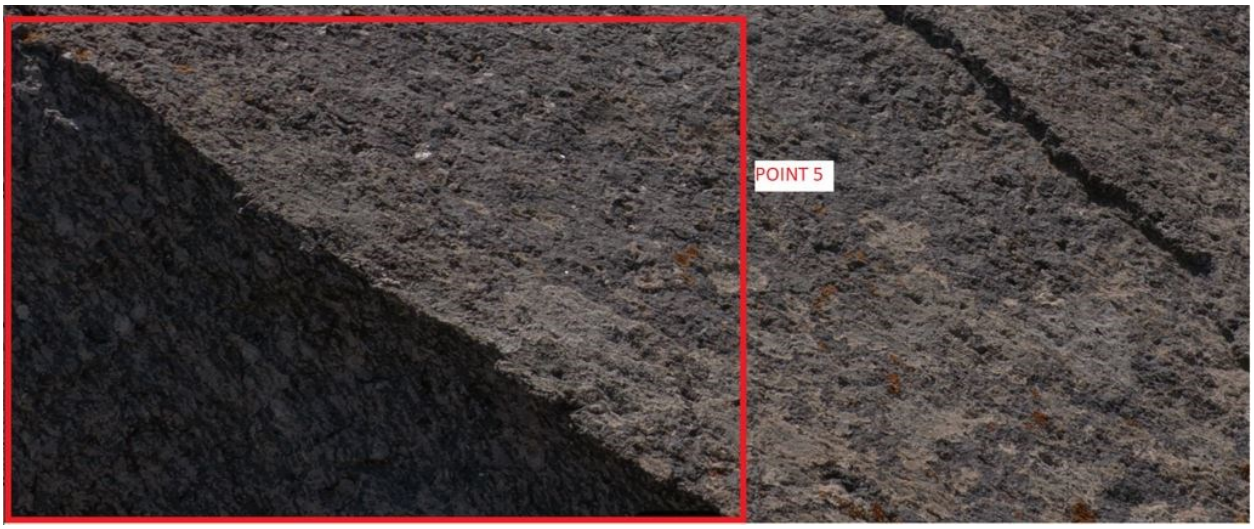

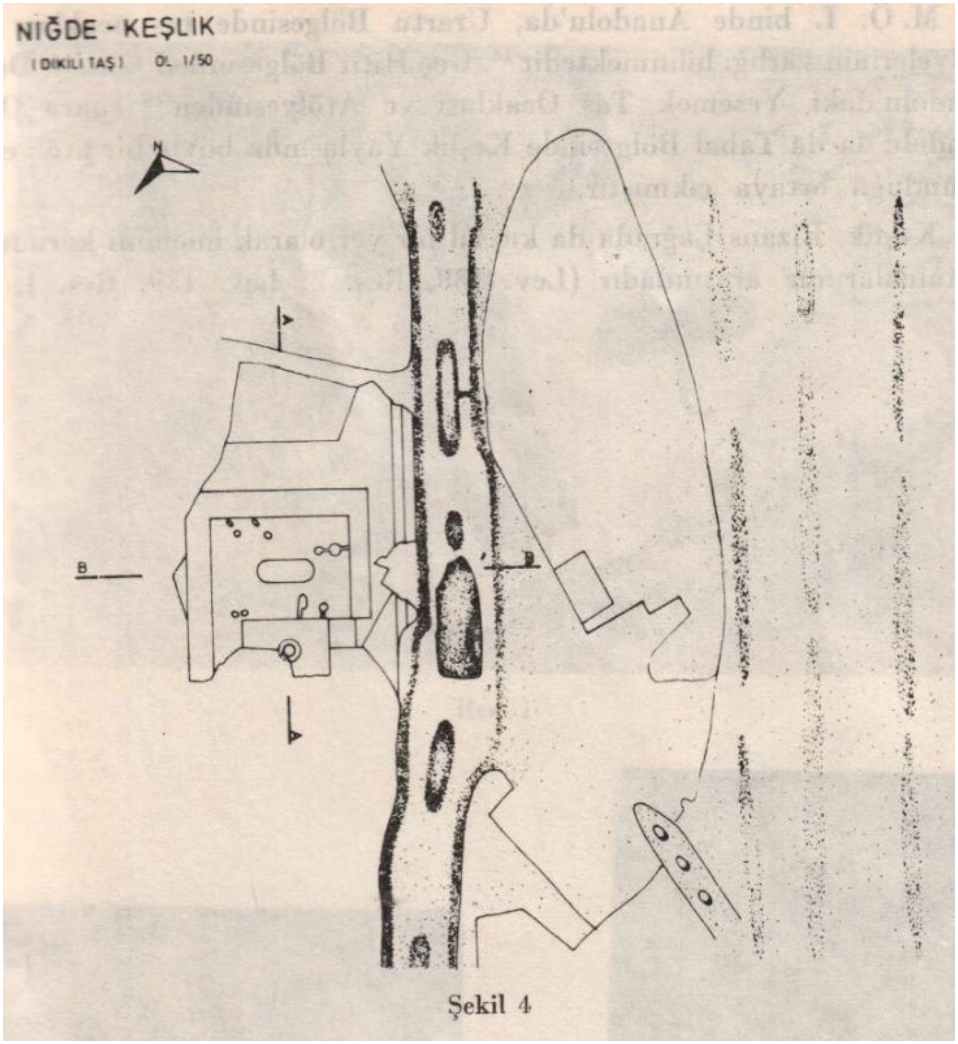

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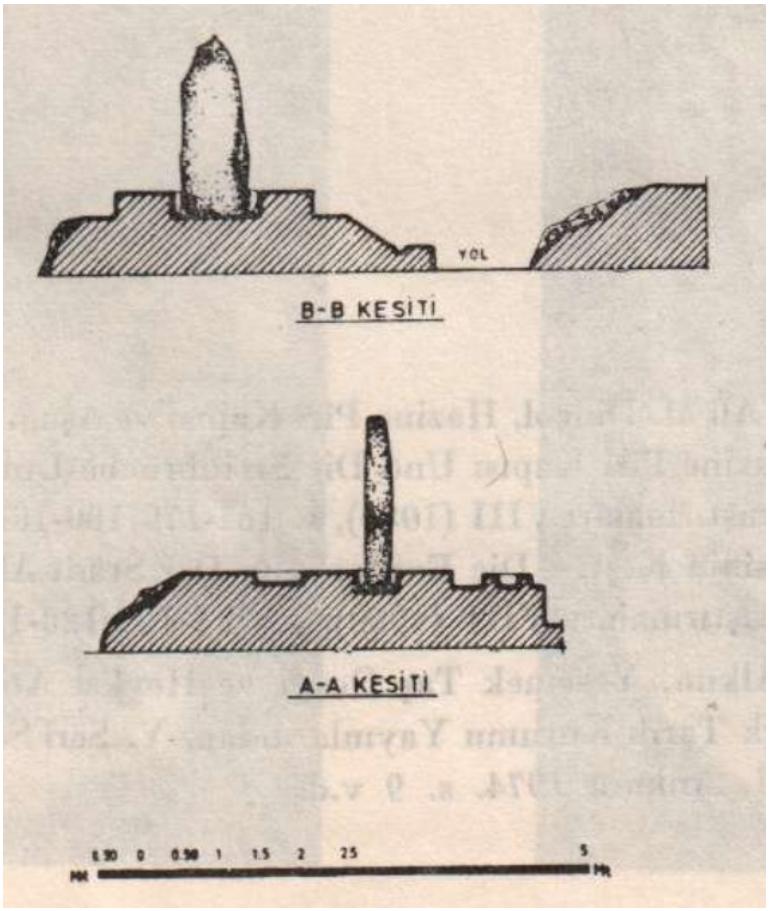
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Mt Mt

2.2) Keşlik Yayla

At an elevation of 1682m asl, the second station of the route is located at a natural rocky outcrop at the center of Keşlik Yayla within the Altunhisar Valley. From what can be reconstructed today, the station consisted of a stele set up on a stone basement. The base is carved into a boulder, which stands on the western slope of a rocky mound 25 m above the rest of the valley floor, dominating this otherwise flat area enclosed by the mountains.

The stele has a height of 145 cm including the base tenon (14 cm deep). Its front has a somewhat trapezoidal shape with the width of the base measuring 68 cm while the top width is 42 cm. The top of the stele is round. The thickness of the stele is 27 cm, and the relief is 0.27 cm high. The boulder that serves as basement is of porphyritic andesite, a local stone that is abundant in the valley (and the same as the bedrock on which Dikilitaş is located). The monument is made from the same material as its basement, and heavily worn due to the properties of this material.

The relief features a male figure representing a deity walking to the right. The deity has long hair that falls on the nape of the neck and a beard. The headgear is weathered, and its details are hardly discernible. His right hand is bent from the elbow, holding a bunch of grapes, the vine of which connects with the ground on the left-hand side of the relief. On his raised right hand he holds a bundle of grain. The stems of the grain are elongated and connect with the ground, framing the relief at its edge, on the right-hand side. The figure has a wide belt. He wears a tunic that has short sleeves and ends above the knees with a double-volute hem. He has bare legs and calf-high boots with points curled upwards. To the right-hand side, between the stems of the barley and the deity there are traces of an inscription, presumably between 9 and 12 lines, that is heavily eroded and barely discernible.

The stele was first discovered in 1962 by Mr. Abdullah Tanık, and by his account at the time of discovery it was overturned a few meters downslope from the stele base located at Kasımtepesi, where the Tanık family lives during summer months for animal husbandry in the higher pastures. Since in the literature its findspot is named as Bayındır Yayla and Keşlik Yayla interchangeably, it is important to note here the distinction: Both these "yayla" are part of the same plateau, only Bayındır Yayla is colloquially used to describe the flat area to the NE corner of the plateau (see map n.?), whereas Keşlik Yayla (or simply yayla) is used to describe the broader area, including both Bayındır to NE and the area around Kasımtepesi at the center of the yayla (Keşlik). In this work “Keşlik Yayla” refers to the area, whereas “KEŞLİK YAYLA” refers to the inscribed monument (after CHLI).

Sezer (1977) has noted the apparent similarities between the late 8th c. Ivriz relief, and identified the god as Tarhunza, and the stele has been dated to 8th c. and attributed to Warpalawa with other similar monuments. Aro (2003, 319) categorizes Tarhunza depictions into three distinct groups, and includes the KEŞLİK YAYLA in the third group which is defined by the bunch of grapes and grain that either grows from the ground or held by the deity, attested solely in the "Tabalian area of central Anatolia".[3] Particularly on the Keşlik Stele she notes the mixture of old and new elements, namely the short kilt with the wavy hemline and the boots with upturned toes of Hittite-Luwian tradition, and the beard and hair styles of an Assyrian origin. Aro also argues that the distinct agrarian elements on this group of "Tabalian" Tarhunza are a reflection of the special traits also attested by Hieroglyphic Luwian inscriptions such as the SULTANHAN inscription, which refers to Tarhunza of the Vineyard that upon receiving offerings "came with all goodness, and the corn-stems(s) burgeoned forth at (his) foot, and the vine was good here" (Hawkins 2000, 467; see also cited in Aro 2003, 320).

The 2009 field survey done by Pavia University has yielded no Iron Age materials nor signs of settlement in this portion of the Yayla as well, despite the intensive effort around the location of the stele for a radius of 50 meters (d’Alfonso and Mora 2009, 647). In order to confirm the absence of IA

[3] Distinct features of other groups are: i)Tarhunzas walking right while holding an axe and thunderbolts with a sword attached to his waist; ii) Tarhunzas standing on a bull, his symbolic animal. (Aro 2003, 317-318

sites in the vicinity they have enlarged the survey area to the easternmost part of the valley, Bayındır Yayla, where they have detected ruins of a medieval Christian settlement instead. They note the possibility of this stele (alongside others in the valley) being a road mark due to the aligned position of their bases, and lack of occupation.

In total, there are three reliefs and four stele that depict the Storm-god of the vineyard. The reliefs are IVRİZ 1, Ivriz 3 and Gökbez. The stelae are BOR 2[4], NİĞDE 2, IVRİZ 2 and KEŞLİK YAYLA. In a 2012 study Mora and Balatti investigate the stele of the region including KEŞLİK YAYLA. They argue that these stelae have two functions; "to celebrate kingship, particularly the pietas of the king, and to spread the worship of a god" (Mora and Balatti 2012, 531). They also note the difference between reliefs of Tuwana and northern Tabal, noting that in the south there is always agricultural references in the form of grapevines and grain. Also, they assert that these agrarian features of Tarhunzas are attested in the inscriptions, particularly of BOR and ANDAVAL. BOR mentions gifts given by "Storm-god of the vineyard" as victory over enemies and agricultural prosperity, bestowed upon Warpalawa who has established a vineyard in honor of the deity. The inscription of ANDAVAL[5], which was found out of context, was set up by "Saruwanis the ruler" of Nahitiya, declaring that he shall pasture the horse-herd "here". It is important to note that even though Mora and Balatti do not detail the kind of pasture mentioned in the text, Hawkins (2000, 516) asserts that it is likely a summer-pasture; a concept that is perfectly encapsulated by the Turkish term "yayla", and according to him it may indicate that the original spot of ANDAVAL (referred as "here" in the inscription) was one such "yayla", which he thought plausible considering the location of KEŞLİK Stele.

Based on the geographical distribution of these monuments Mora and Balatti reconstruct the core region of Tuwana in the area that corresponds with the modern settlements of Niğde, Bor, Kemerhisar

[4] There is BOR and BOR 2: BOR is the fragmented stele with inscription depicting Warpalawa, appearing in CHLI as "BOR". BOR 2 is the stele depicting Tarhunzas, found in 2012.

[5] The inscription of ANDAVAL (translation after Hawkins 2000, 515): " I (am) [S]aru[w]anis the ruler, the lord of the city Nahitiya. And I . . . And when(?) I shall bring (it) out of the plains, I shall (summer-)pasture the horseherd here, and (for) me it [.....]and Warpalawa[...]make great [..."]

and Keşlik (Altunhisar). They consider Ivriz monuments away from the core, and associate the god's appearance in this spring with the prominent "sacred nature of the place" (Mora and Balatti 2012, 531).

The inscription of SULTANHAN referring to Tarhunza of the Vineyard located northwest of Kayseri, far removed from the core region of Tuwana, demonstrates that the worship of this deity with these agrarian aspects (particularly with grains and grapes) had a wider spread within Tabal, beyond Bor Plain into the north. The AKSARAY inscription found within the modern city of Aksaray (located between Hasandağ and Tuz Gölü) can be considered another example of this sort of inscription. Here Tarhunza is not directly associated with vineyards, but he is depicted as a provider of prosperity, causing abundance in the land particularly in relation to oil, grains and wine; during the reign of the ruler Kiyakiya (John David Hawkins 2000, 475–78). Both SULTANHAN and AKSARAY inscriptions have elements that indicate contemporaneity with the reign of the "great-king" Wasusarma.[6] Following Weeden, this “great-king” presumably ruled in northern Tabal until his deposition by Tiglath-Pilaser III in 729 BCE for "imitating the deeds of Assyria" (Weeden 2023, 995; with further literature). Wasusarma was also at one point allied with Kiyakiya and Warpalawa (see TOPADA inscription; Hawkins 2000, 451–61), which is interesting considering that the spread of this aspect of Tarhunza seems to correspond with the territories controlled by this alliance.

Despite this wider spread of veneration attested by the inscriptions, the particular iconography of this agrarian Tarhunza with grapes and grain is only attested in the Bor Plain[7]; therefore it is directly associated with the Kingdom of Tuwana, in particular with the reigns of Warpalawa and Muwaharani. The areas of SULTANHAN and AKSARAY therefore can be interpreted as the periphery of the cult that is centered in the Bor Plain.

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[6] Wasusarma is directly mentioned in SULTANHAN, detailed below. A ruler named Kiyakiya appears in both AKSARAY and TOPADA; the latter is commissioned by Wasusarma himself.

[7] AKSARAY comes with a fragmented depiction of the deity which is presumably Tarhunza. However, although the AKSARAY inscription invokes the agrarian aspect of Tarhunza, there are no vegetal elements to be seen near the feet of the deity, and on his belt a sheath is observable, which is not attested in any other Tarhunza of the Vineyard depictions.

At this stage of the research these depictions of the "Storm God of the Vineyard" (Group 3 by Aro's classification) are traditionally dated to the late 8th c. BCE, corresponding with the reigns of Warpalawa and Muwaharani. The IVRİZ group and BOR are commissioned by Warpalawa as attested by their inscriptions. Although the stelae commissioned by Muwaharani (NİĞDE 2 and possibly Gökbez) share the same style, their composition includes different elements. In both of them one could argue that the deity is a blend of Aro's Group 1 and 3; holding an axe and storm bolts in his hands despite still including the agricultural elements (grapes and grain), this time near the feet or to the side of the deity in the composition. These iconographical differences between the Tarhunza of Muwaharani and the Tarhunza of Warpalawa has caused a difference in opinion regarding the genealogy of the kings of Tuwana. Based on the inscriptions, Warpalawa who presumably has created the majority of these monuments is the son of a Muwaharani, and Muwaharani who has commissioned NİĞDE 2 (and possibly Gökbez) is the son of a Warpalawa. Mora and Balatti argue for a possible earlier date for the stele produced by Muwaharani, which reconstructs the Tuwanuwan genealogy as Warpalawa I > Muwaharani > Warpalawa II. This view is based on the sun-disk found on NİĞDE 2, which they argue to be an earlier element; the paleographical archaisms on NİĞDE 2; and the mention of Warpalawa in ANDAVAL Stele, which is stylistically and paleographically an earlier production than late 8th c. BCE (Mora and Balatti 2012, 533–37; Balatti 2012). Hawkins had initially reconstructed the genealogy as Muwaharani I > Warpalawa > Muwaharani II, arguing that the consistency and uniformity of the iconography associated with Warpalawa is suggestive of a single king rather than multiple, which is likely to correspond with the single Urpala'a known in the Assyrian record (John David Hawkins 2000, 430). This view is more recently supported and expanded upon by Simon (2013). There is consensus however from both sides of the debate, on the fact that the Warpalawa corresponding with the Assyrian Urpala'a is the commissioner of the aforementioned monuments based on iconographic consistency, placing the monuments to late 8th c. BCE. For Mora and Balatti, Urpala'a could be Warpalawa II, putting NİĞDE 2 earlier than other monuments of late 8th c. BCE. For Hawkins (and later, Simon), Urpala'a is more likely Warpalawa I, and NİĞDE 2 (and possibly Gökbez) are slightly later, commissioned by Muwaharani II, son of Warpalawa I.

A stylistic difference between the monuments commissioned by these two kings is attested in the hem of the tunic of Tarhunza: in KEŞLİK, BOR 2, and the all three of the IVRİZ group it is a double-volute hem; whereas Tarhunza in NİĞDE 2 and Gökbez has a straight hem that is knee-level. In case of NİĞDE 2 it is possible to see the vertical lines decorating the fringes of the hem. In the fragment of the AKSARAY Stele the hem of the god's tunic is straight with vertical lines akin to Muwaharani' monuments.

KEŞLİK is identical to the other monuments commissioned by Warpalawa in terms of style, and consistent with the iconography especially considering IVRİZ 2; which also lacks the depiction of the king in the composition. However, an argument on the contrary can be made based on the cost of the monument. KEŞLİK is starkly different in that it is a low-cost monument compared to all the others discussed, based on the material, scale, and in many instances, craftsmanship. It is made of local andesite that is easily accessible and plentiful at the valley, and not of a stone that is exported. More significantly, its size is miniscule compared to the other stelae that are commissioned by both Muwaharani (see fig.? below for KEŞLİK and NİĞDE 2 side to side), and Warpalawa. IVRİZ 2, which provides the closest comparanda in terms of medium, style, and composition, is only preserved up to the waist and the height of the preserved part is c. 130 cm tall. KEŞLİK stele in its fully preserved state is only 131 cm tall, 145 with the base tenon. IVRİZ 2 in its entirety was about twice the size of KEŞLİK. Considering the entirety of the monumental corpus that are known to be commissioned by the kings of Tuwana, the disparity between KEŞLİK and others suggests a possibility that it was not built by a royal with vast resources, but funded by relatively modest means; either by individual(s) of local prominence, or by a community. This Tarhunza is perhaps a dedication by a servant of Warpalawa, just like Sarwatiwara who is the commissioner of SULTANHAN, and “a servant of Wasusarma”.

This argument is weakened by the fact that in Tabal there are no known depictions of deities commissioned by servants of kings. Monumental works attributed to royal servants tend to be inscriptions only (BULGARMADEN, PORSUK, SULTANHAN), which would make KEŞLİK an outlier, and it would imply that a servant of a king is also capable of producing sacred imagery. Well, KEŞLİK is an outlier in terms of cost, and this needs to be explained. A closer look into the contents of

these said inscriptions, SULTANHAN in particular, provides precedent for KEŞLİK's potentially local commission: SULTANHAN consists of a single stele and its base, both adorned with inscriptions and no relief. In text, Sarwatiwaras explicitly states in multiple lines, that he has "set up this Tarhunzas".[8] This clearly demonstrates that the servants of kings were in capable of, and in fact did produce (or at least reproduce) divine imagery; as the inscription implies the existence of another stele with the image of the deity in the vicinity, now lost. To think otherwise is to assume that SULTANHAN stele that solely consists of inscriptions is referred to as "this Tarhunzas", which does not follow.

Not only the local commission of KEŞLİK has precedent, the contrary idea that it is commissioned by Warpalawa creates further questions that needs to be answered: Claudia Glatz has written extensively on the landscape monuments of LBA Anatolia from the perspective of Costly Signaling Theory. As they put "...Hittite great kings and their political rivals financed the construction of landscape monuments not only as a reflection of their past glories, but also as a way of indicating to their competitors the amount of labor and other resources relevant to political and military contests that they commanded in order to potentially solicit submission or at least deter aggression." (Glatz and Plourde 2011, 36). There is no reason a similar dynamic should not apply to IA kings of Tabal; as it is a period and region characterized by political fragmentation and constant attempts at garnering legitimacy (self-denominated great-kings like Hartapu and Wasusarma; an explosion of monumental representation throughout the region; a desire to associate oneself with the symbols of status belonging to greater regional powers by utilizing Phrygian and Assyrian elements in monumental art; "imitating the deeds of Assyria"...). Following Glatz and Plourde, whether they are cultic or commemorative, an aspect of landscape monuments is that they are status symbols, more importantly, a way of signaling power that is mainly dependent on cost. The costlier the monument, greater the display of power and status. Then the question becomes, what would prompt a king, who has been producing exclusively

[8] The beginning of SULTANHAN inscription with relevant parts emboldened, translation after Hawkins 2000 (465-467): "I (am)[Sarwatiwaras, PN's] son, the hero Wasusarmas's servant. **I set up this Tarhunzas of the Vineyard** (saying) :"We will set (him) up afterwards with an ox and nine monthling sheep". **When I presented him**, he came with all goodness, and the corn-stem(s) burgeoned forth at (his) foot, and the vine was good here. And Tarhunzas of the Vineyard gave [to] Wasusarmas,[... ki]ng, a mighty courage, and for him he put his enemies under his feet. **When I set him up**, and when in the land 2 sheep stood (for) 80 (measures of) barley, afterwards I presented him with a TAWANI-bird here. So Tarhunzas made these assistances for Sarwatiwaras Wasusarmas's servant, ..."

grandiose monumental art throughout his realm, to endorse a comparatively modest and overall less imposing piece, especially considering the potential implications of a low-cost monument? If KEŞLİK is commissioned by Warpalawa, the small size and local material use implies that it was not meant to be a grand work like the others, but a more standardized, functional type of monument which only makes sense if they were mass-produced; adorning every center or sacred space throughout the broader area controlled by Warpalawa as a series of low-cost, standardized monuments commissioned by the highest authority to reinforce political unity within the kingdom by a common cult that is tied to royal ideology. Only then, this local, small stele's commission by the highest regional authority could be explained. But then, shouldn't we have found more of these "standard", less imposing representations throughout the region? Considering the other stelae commissioned by Warpalawa, the fact that there are only two others, BOR and IVRIZ 2, which differ significantly in terms of craftsmanship, scale and material quality indicates that this is not the case. For all these reasons listed above, I lean towards a servant-commissioner, or a communal stele for local veneration. There are no IA temples discovered so far in Kınık. Considering the accumulation of the stelae in the Altunhisar Valley, it is possible that the area was the designated extraurban sacred space, in a way that is reminiscent of BA Hittite extraurban temples such as Yazılıkaya, or Suppitassu.

Putting it all together, KEŞLİK belongs with the group of Tarhunzas depictions that are commissioned under the reign of Warpalawa, who —regardless of genealogy— corresponds with the Urpala'a attested in the Assyrian sources in years between 738-709 BCE, in terms of style and iconography. However, the comparatively low cost of the monument indicates that its construction may have been incentivized not by the king but by another contemporaneous agency of modest means, presumably a local administrator or community, utilizing the same workshop that was active during the time.

left side

obverse

right side


NİĞDE STELİ
(HİTİT FIRTINA TANRISI TESUP)
(M.Ö. 8. yy sonu ? yy. başı)
MUVAHARAS TARAFINDAN FIRTINA TANRISI'NA SUNU
Kahraman, kral Warpalawas'ın oğlu Tarhunzas ve tanrıların sevdiği kahraman kral Tarhunzas Muvaharas tarafından yapıldı.
NİĞDE STELE
(HITTITE STORM GOD TESHUP)
(Ca. 8th-7th centuries B.C.)
VOTIVE TO THE STORM GOD BY MUVAHARAS
This Tarhunzas Muvaharas (ma) de (?), the hero, the king loved by Tarhunzas (and) the Gods, the son of Warpalawas the ruler, the hero.

2.3) Tavşantepe 2

The stele is located at a narrow choke point along the valley floor at an elevation of 1800m asl. It was found in a sand deposit and its original spot is unknown (Çınaroğlu 1989), albeit Lanaro hyphothesizes that its original context was likely nearby (lanaro89). It consists of a fragmented block damaged from all four sides with a scene of worship, made from the same porphyritic andesite as KEŞLİK and TAVŞANTEPE 1.

The depiction consists of a deity that stands on a pedestal above an animal, possibly a feline, and another figure that may belong to a worshipper. The decoration on the pedestal consists of three rows of squares, each containing four parallel lines. The direction of the lines differs in each adjacent square, alternating between horizontal and vertical. The figure standing on the pedestal has pointed boots and a long-skirted outfit with a zigzag pattern at the hem. The pedestal is positioned on the back of a large animal that covers half of the visible portion of the relief. The animal has a long neck, and half of its head is preserved. The only discernible feature on it is the pointed triangular ear. A limb is visible underneath the torso, presumably a paw as indicated by the vertical incisions. On the top left corner another figure is depicted in an angle directed towards the figure on the pedestal, holding a long straight stick on his only visible arm. The figure has pointed boots and a long tunic with the same zigzag pattern at its hem. At the chest of the figure a circle is depicted. Another animal is depicted in front of the figure below the arm. It is a depiction of a quadruped that is reminiscent of an equid; with the pronounced snout, protruding forelock and the tail lacking a discernible tuft.

A series of hyphotheses produced by Çınaroğlu following the discovery of the stele are later refuted by Lanaro: Çınaroğlu interprets the protrustion on the left side of the monument as a tenon, and suggests that TAVŞANTEPE 2 may once have been associated with a series of reliefs, perhaps decorating a gate complex. Lanaro argues that there is no clear evidence to support this hyphothesis. (CITE,presumably lanaro89). Likewise, Çınaroğlu's interpretation of a seated deity (89,5) is refuted by Lanaro, arguing

that there is no bend at the knee, and the rear part of the feline is preserved enough to demonstrate that there is no room for a chair (lanaro 89). As for the quadruped at the center of the relief Lanaro sees an equid as opposed to the lion cub proposed by Çınaroğlu (Çınaroğlu 89.5, lanaro). Needless to say, I agree with Lanaro on the genus of the animal, but coming back to the point on horse tails I have made on Ivriz r.2, the drawing of the stele makes the tail appear narrower and especially longer than it actually is on the relief. The animal on the relief has a tail that is shorter with a consistent thickness, except for the base where it connects with the body. Only major difference between the tails of the animals from Ivriz r.2 and TAVŞANTEPE 2 are the length of them, otherwise the proportions and the thickness are comparable.

This monument is the counterpart of TAVŞANTEPE 1, and it is dated together based on similarities such as the zig-zag patterns visible at the tunic hems', the woven pattern on the deities footstool, and the overall composition and style. Lanaro notes two differing elements between these stelae, one being the rendition of the feline, and the other being the gesture of the "worshipper". Lanaro argues that the differing style of the felines may be due to them being rendered by different hands. And on the worshipper, she notes that in TAVŞANTEPE 1 the figure shows a typical worshipping gesture with a raised hand bent from the elbow, whereas in TAVŞANTEPE 2 the figure holds a stick therefore no gesture is visible. I think neither figure necessarily shows a worshipping gesture, and they are therefore more alike in this manner (detailed under TAVŞANTEPE 1).

2.4) Tavşantepe 1

The last station of the route, Tavşantepe 1 is at 1982 masl, located near the northern exit of the valley before it opens to the plain of Çiftlik and Northern Anatolia. The monument is positioned at a saddle point between the peaks of Keçiboyduran to the west and Melendiz to the east, and much like the area of Tavşantepe 2, this area is a narrow, unavoidable pass that controls the movement in the N-S direction. It is named after Tavşan Tepe (Rabbit Hill) that is located 500 mts north of the stele. This hill has an elevation of 2050 masl, and the surveys have provided surface finds that only range in

between EBA III and MBA I (CITE,dalfmora2007;826,2009,647 ;; also cited in Lanaro 88) *should add a map and mark it* Currently the stele is broken from the center and in two pieces, and displayed as such in the garden of the Niğde Museum next to TAVŞANTEPE 2. It is made from the same local porphyritic andesite as the other monuments of the valley except for Dikilitaş. It is heavily worn due to the properties of this material.

maybe Tavşan Tepe stuff goes to the arch background, history of the route, surveys etc. I mention them in fucking DT. I shouldnt. I should either do that in the ch2 intro or ch1.2

The monument is 210 cm tall and 95 cm wide, making it one of the biggest Neo-Hittite stelae known. It has a trapezoid shape that narrows near the top. The stele base with a 97x63 cm socket is discovered in 2006 **d'Alfonso, Mora 2007: 826 CITE PROPERLY**. Later it got unsettled and partially broken by treasure hunters following the first visit of the team from Pavia University, in between summer 2006 and summer 2007. It was then completely lost some time around the construction of the asphalt road in 2010. The spatial analysis conducted in the next chapter is only possible because the coordinates of the base have been recorded by the Kınık Höyük Archaeological team before this unforeseen eradication.

The depiction is of a figure, sitting on a chair above a platform, that rests upon a couchant feline. The figure has a short sleeved long tunic with a pleated skirt and pointed shoes. She has a pronounced nose, and her head is smooth in a way that is indicative of a cap. In front of the head there are heavily weathered shapes which may be of an animal, or eroded HL signs. Both her hands are bent from the elbow in front of her. Under her extended right hand a stick protrudes towards the ground. On her left hand she seems to hold a triangular object with a short stem between her index and thumb. In front of her at the height of her knee a vertical object with a wider upper end is visible. The object is thicker than the stick held in the left hand of the figure, and even though the fracture cuts the depiction in half, it does not seem to reach the ground since it is not visible next to the feet below the fractured area. Her feet rest upon a pedestal that has the same decoration with the one in Tavşantepe 2, which is made of squares consisting of four parallel lines in alternating directions. On the panel of the seat an anthropomorphic figure with a bird head and wings are depicted. It has pointed shoes and is seemingly

holding the seat up with its hands. Underneath this figure a smaller platform is visible, separating it from the feline. The feline is at the lowest part of the relief, and it has parallel incised lines that go around its entire body, changing pattern on each prominent body part. The convex lines on the neck have no sharp angles and they seem to indicate a mane. The lines on the back are each made out of an angled arrow pointing towards left. On the chest of the animal there are four parallel incised lines that are divided by the shoulder. On the hindleg the visible horizontal lines are cut by two thicker vertical lines, in a way that are reminiscent of bracelets(?). Both the visible foreleg and hindleg end in a hook shaped paw. The animal has an almond shaped eye and no discernable ears, and it has its jaw open. The tail is stuck to the body and the point of it curls upwards. On the top left corner of the relief another figure that is smaller in scale can be seen. The figure wears a long tunic with the zigzag pattern at the hem, identical to the patterns visible in Tavşantepe 2. His head is fractured and hands eroded, but the right arm of the figure is bent from the elbow with the hand near the hip.

The stele is initially discovered by Aykut Çınaroğlu, and published in 1986 together with the other monuments of the route (CITE,Ç.328). Çınaroğlu also mentions other stele fragments he encountered during his surveys, namely anotherher stele socket and an engraved stone which he presumes to be the draft of a carving (CITE,FIG), but Lanaro in her 2015 study mentions that she was unable to identify these fragments, neither on the field nor in the Niğde Museum (CITE 82,). They are unavailable for me as well. Çınaroğlu dates TAVŞANTEPE 1 to the second half of the 8th - 7th c. BCE, based on its supposed relation with other monuments from Tuwana, Keşlik in particular (CITE89:7, as cited in Lanaro 87). *Maybe mention this at the intro* Çınaroğlu also proposed the route reaching GD, as mentioned above (I assume?).

Mellink dates the stele to the "generation after Warpalawas" (Mellink1983,435; also cited in Lanaro 2015, 87), corresponding with the beginning of the 7th c. BCE. He does not justify this dating, however Lanaro argues that this is due to the 7th c. being a time period where Assyrian influence over Tabal and Tabalian artworks are diminished. And it is important to note that at the time the archaeological data from the region did not allow for assigning monumental works to a period earlier than 8th c. BCE. *referred here? there? will be referred somewhere.*

Aro follows Çınaroğlu in dating the monument to second half of the 8th c. BCE, (ARO321), and further argues that a date in 7th c. is also possible, since thrones with supporting geniuses are attested only from the reign of Neo-Assyrian king Sennacherib (704-681 BCE). She notes that the execution of the stele shows no great workmanship, and identification of the goddess with Kubaba or Hepat are possible, depending on the species of the feline. She associates lion with Kubaba and Hepat with a panther.

The most detailed study of this monument to date is provided by Anna Lanaro in a 2015 publication titled "A Goddess Among Stormgods. The Stele of Tavşantepe and the Landscape Monuments of Southern Cappadocia", which in many ways is the foundational work that this thesis builds upon.

First and foremost, Lanaro argues that the corpus of reliefs and other stelae from Tuwana are very homogenous; and distant from TAVŞANTEPE 1 in both subject and style; and she notes that these monuments are heavily influenced by the Assyrian artistic tradition in terms of hairstyle, attire and body rendering (Balatti12 158-59 with further literature, as cited by Lanaro 87). In reference to Aro (Aro 1998:195-97; 2003,321), she argues that since none of these elements appear on TAVŞANTEPE 1, the other monuments cannot provide a stylistic comparison; and this lack of congruence should be taken into account when dating the stele.[9]

[9] Aro views TAVŞANTEPE 1 as a product of a local workshop, but the same argument raised by Lorenzo d'Alfonso regarding the debate surrounding Ivriz r.2 applies also here; differing workshops do not explain the stark difference in subject matter, and the fact that this difference corresponds with difference in stylistic features, such as Assyrianizing elements or lack thereof, is strongly suggestive of a different temporailty, and not fully attributable to the activities of contemporaneous workshops.

Moving forward with the formal analysis, Lanaro argues that the lion of TAVŞANTEPE 1 shows many similarities with 10th-9th c. BCE lion representations from Tell Halaf (LANARO87, with literature therein). Likewise, she argues that the "smile line" and chin of the goddess of TAVŞANTEPE 1 are analogous to the features of some figures from Zincirli, Maraş, and Malatya (Orthmann 1971: Zincirli I 60–61; Malatya I 91–92, 141; Maraş I 85–86, 138 ; as cited in Lanaro87); suggesting an early date in the 10th to 9th c. BCE. She asserts that the bird-headed demon is a well-known figure in the Syro-Anatolian tradition, and it is most closely paralleled by examples dating mostly from the end of the second millenium, to the early first millenium BCE; additionally, the high-backed chairs with curved top rails are attested on reliefs from CA and northern Syria dating to the beginning of the first millenium BCE (Lanaro 87,with further lit). The banquet scenes from Karatepe are given as an example for the existence of panels decorating the space between the armrest and the seat, or the seat and the stretcher during this time period. Lanaro argues that all things considered, the figurative side panel on the chair is not enough to assign a late date to this stele, since all the other elements point to a date earlier than the acme of Assyrian influence in Southern Cappadocia, that is the second half of the 8th c. BCE. She states that the figurative side panel do not necessarily need to be explained as an adoption of a foreign decorative technique, since the applied decoration is attested in Anatolia, and the manner of application may have been a local development independent from foreign processes. Regarding the precise date of the stele, she states that while a date at the end of the second and beginning of the first millenium BCE is more likely, a date as late as the first half of the 9th c. BCE is also possible. As per the influences, she argues that there are features indicative of a connection with Cilicia (stylistic affinities between the goddess and group A of Karatepe) and northern Syria (in the representation of the lion and the bird-headed demon).

On the identity of the figure Lanaro interprets both the object held on the left hand of the goddess as a wheat stalk and the vertical object next to her feet as a sheaf of wheat, and builds an argumentation on these features for a goddess of fertility that is local to the region, incorporating shared elements with Tarhunzas of the Vineyard, and presumably the predecessor of the female deity of fertility worshipped in Roman Tyana also represented with wheat (LANARO,84). Also, she interprets the figure on the top left in a pose of worship, with his left arm bent from the elbow extended outward (see fig? for the

drawing). I find the drawing too interpretive on these points, as I am unable to discern any detail that is indicative of wheat, neither in the hand of the goddess nor on the ground next to her. If the goddess is holding anything, in my opinion it is a triangular object, proportionate with the size of the stem that is protruding from the lower part of the hand. Likewise, in between the worshipper and the head of the goddess I don't necessarily see a poorly executed, disproportionate arm extended in worship; but a quadruped (perhaps a cervid based on the details reminiscent of an antler), similar to the composition attested in TAVŞANTEPE 2, which is the stylistic counterpart of this stele.

As for the object held in hand, I tentatively propose an identification with a lotus flower, based on the triangular shape and the stem.

Interestingly, the use of lotus flower finds paralells also in Tell Halaf and Cilicia (see Orthmann 1971 for T. Halaf A3/171 dated 10th to 9th c.; Zincirli K/11, K1, J/2, K/2; Zincirli F/1a; Zincirli E/2; and also, Nimrud S/4), fitting with the stylistic analysis conducted by Lanaro based on other features, without utilizing this line of reasoning.

Also worth mentioning that the lotus flower is also apparent in Kınık, albeit at a later period. The vessel KIN12A282.1, one of the finest vessels of the 7th-6th c. vessel group has a lotus flower decoration. This motif is interpreted as an indicator of direct connection with the east Greek world, and the lack of it in northern sites were seen as a peculiarity, despite the presence of Pontic colonies, Sinope and Amisos. The lotus iconography is apparent in Cilicia at least until the very end of 8th c. BCE, as attested by the reliefs of the King Bar-Rakib of Sam'al (733 to ca. 713 BCE).

Finally, regarding the entirety of the route and the existence of monuments associated with different periods Lanaro develops: "In the eighth century BC, when the kings of Tuwana held control of the region, TAVŞANTEPE 1 together with the coeval TAVŞANTEPE 2 were not removed; on the contrary, they were integrated within a group of landscape monuments distributed in correspondence to crossroads and springs within the borders of the land of Tuwana. This testifies to the intention of the new ruling dynasty to take on and continue the previous local praxis of ‘marking a specific place as

culturally relevant' (a process of 'placemaking': cf. Harmanşah 2011; 2014). In this period, therefore, the Altunhisar valley represented not only a route connecting Kınık Höyük and Göllüdağ, but it was also incorporated into the road network of southern Cappadocia overseen by the kings of Tuwana. Since this valley is divided by many deep ridges, it seems likely that the four stelae situated here served to indicate the right path through it. Moreover, it is possible that these monuments had multiple functions. The fact that a further cultic image, KEŞLIK YAYLA, was added at this time, as well as the fact that the Dikilitaş complex may have been used for libations, contribute to an interpretation of this route as a processional way leading towards Göllüdağ, as initially proposed by Çınaroğlu." (Lanaro 91).

She highlights the integration of the new monuments with the already existing ones, and assigns this to a desire by the Tuwanuwan elite to mark a place of cultural relevance with their own symbols, and incorporating this place into the Tuwanuwan network. However, this "placemaking process" tends to occur in the manner of a takeover as opposed to an integration. The themes of integration vs. domination at the cross-section of cult and politics, and the patterns of placemaking developed by Ömür Harmanşah will be discussed in Ch.4, with additional data based on the results of the geospatial analysis conducted in Ch.3.

2.5) A Summary of the State of Research

For all intents and purposes, the formal analyses suggest that there are two distinct group of monuments that differ from one another in both style and subject matter. Ivriz r.2 and TAVŞANTEPE 1-2 comprise one group of monuments, characterized by low relief, lack of Assyrianizing elements, and offering scenes with similar compositions and elements; as opposed to what can be called "the Tuwana Group" (cite, presumably balatti) , that includes the monuments constructed by the kings of Tuwana and KEŞLİK YAYLA; showing a standardized iconography with heavy external influence and a fixed subject matter (Storm-god of the Vineyard), none of which are apparent on the other group.

So far, despite elements that are suggestive of an earlier date, the monuments belonging to both groups were (are) considered contemporaneous and grouped together mainly because of their spatial proximity. Furthermore, during the time of these monuments initial discovery and study, the stage of archaeological research in the Bor Plain could not provide substantial evidence for complexity in the region between the collapse (12th c. BCE) and the emergence of Tabalian polities and wide-scale appearance of monumental art (around 8th c. BCE). The recent archaeological data from the area, in particular Kınık Höyük, demonstrates that organizational powers capable of generating monumental art existed in the region at the latest from 11th c. BCE onwards.

As things stand, their spatial distribution is the only remaining reason for dating these monuments together.

Chapter 3: The Geospatial Study of the Route

In order to understand the definition of the via sacra by ancient cultic and political institutions, but also to get a sense of the perception of worshippers and peregrines, as well as an holistic reconstruction of the entanglement between nature and the human artificial constructs there are today powerful means of analysis that will be dealt with in the present chapter.

3.1) The Visibility Analyses

Visibility analysis is an invaluable tool in understanding the purpose and function of landscape monuments, especially in cases like Altunhisar Valley where the scarcity of other textual or material evidence limits the efforts of reconstruction. In her 2021 book "Urban Rituals in Sacred Landscapes in Hellenistic Asia Minor" Christina G. Williamson discusses the role of vision and viewsheds (an area that is visible from a given point in space) in forming sacred landscapes and creating regional identities. Referring to the studies regarding the cognitive processes of memory-making, she highlights that the human mind conceptualizes its environment spatially through visual memories, and the understanding of territory is one of a lateral construction. In other words the 'regionalization' of earlier societies was not based on the bird-eye view of an area; rather it was based on hodological, street-level perspectives. This sort of territorial conceptualization is one that relies upon viewsheds, since they are how landscape is experienced and especially recalled. The 'anchor points', the distinct features in the landscape that characterize any given viewshed, play a particularly important role in connecting series of viewsheds between themselves, and thus creating a cohesive landscape which is recognized as the "territory". These anchors could be natural, such as springs, mountains, rivers; or artificial, such as shrines, sanctuaries and monuments, which are often related to prominent landscape features themselves. Furthermore, instead of distances, the human mind remembers space through mental snapshots of single views, and since features that occur within a single view are remembered together, they are mentally grouped together

and so 'feel' nearer than features that are not in view. This perceived closeness makes the environment much more comprehensible: Just as physical paths provide real access to distant targets, these visual paths work to compress the perception of space, bringing the objects within view into a close and comprehensive visual region, collapsing the distance in between. Williamson notes that prominent anchor points are not necessarily the ones that provide the largest viewshed per se, but they can be ones that connect two or more viewsheds like gates in urban contexts or passage points that connect two different areas in the landscape that have no intervisibility otherwise. These "spatial hinges" serve the same purpose as landmarks in acting as anchors, linking mental snapshots together and directing human movement. Routes serve a similar purpose since they would also produce a series of mental snapshots at every turn that are later sequentially stitched together by the brain. The result would be an expanded 'visual region', with one snapshot flowing over into the next as the route is recalled. In this respect, processions play an important role in not just connecting city and sanctuary, but in collapsing the space in between. Linear rituals such as processions create an intimate familiarity with the landscape by repetition, and were equally critical in marking not just the natural landmarks but also the villages, tombs, and shrines en route that foregrounded these key places. These rituals all enabled the community to 'perform the region', as they tied territory and community together by collectively crossing the countryside now designated as belonging to them as a group .This closeness would have been intensified with every stop along the way – at shrines, altars, tombs, but also springs, trees and other resting points – and every repetition of the ceremony ensured that the space between was mentally 'chunked', merging the vistas along the twists and turns into one comprehensive unit of space. Understanding these stops as familiar anchors of reference adds a new dimension to their importance.

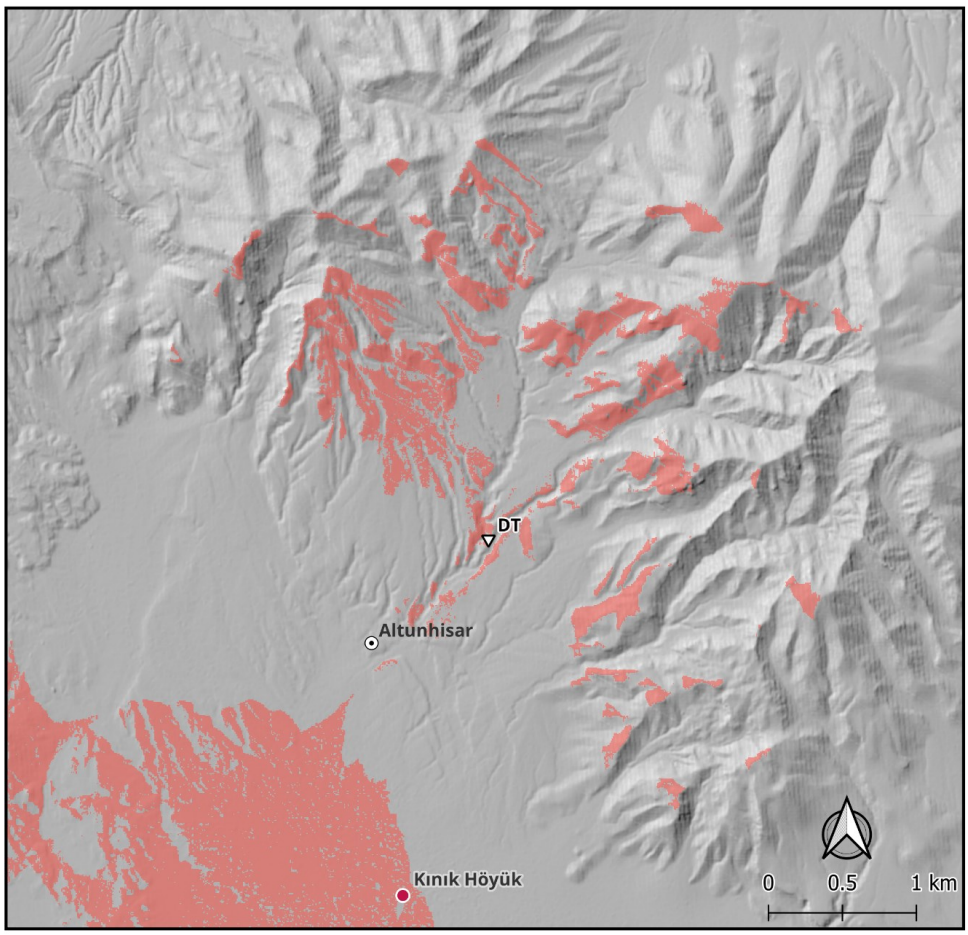
Following this framework set by Williamson, I have conducted a series of visibility analyses in order to assess the relation between these stelae and their relation to the other features of the landscape, including the route. The route that passes through Altunhisar Valley is not a constructed one: except for its initial 30m portion alongside Dikilitaş, there are no traces of any recognizable pathway. This may be partially due to the modern asphalt road that is constructed on the only feasible path between Tavşantepe 1 and 2, however in the area between Dikilitaş and Tavşantepe 2 (including Keşlik) there

are no material or architectural finds that indicate the existence of a paved route; if there was a tangible route that had passed through it would have been one of a simpler means, such as a flattened earth path.

The original positions of the three out of these four stelae; namely Tavşantepe 1, Keşlik and Dikilitaş, are known since the bases of them are all accounted for. The base of Tavşantepe 2 however was never found, therefore it is important to note that although its findspot is likely in the vicinity of the spot of its original placement, the analysis conducted for this particular stele is only useful in giving a general idea, an approximation, and not definitive by any means.

Viewshed: Dikilitaş

Dikilitaş (DT) Viewshed



▽ Dikilitaş (DT)
Area visible from Dikilitaş (DT)
Iron Age Site
Modern Settlement

Dataset: Japan Aerospace Exploration Agency (2021). ALOS World 3D 30 meter DEM. V3.2, Jan 2021. Distributed by OpenTopography.

EPSG:32636 - WGS 84 / UTM zone 36N
Adahan Güney

Figure 1

This is the viewshed map of the Dikilitaş Stele created according to the following parameters via QGIS: Atmospheric refraction: 0.130000, calculate earth's curvature, observer height: 2 m. The observer height is set according to the elevated platform that the stele stands upon. Areas in red mark the territory that is visible from the point of Dikilitaş. In this map we can observe that Dikilitaş has a wide view range, commanding over most of the Bor Plain that is immediately to the south of the valley, including Kınık Höyük (**FIG** with kınık in the background). It has a visual connection with the mountains and peaks that surround the valley, including the highest peak of the Melendiz Mountain system, which can also be seen in this photograph taken in the 2007 Survey by University of Pavia (**FIG**:dikilitaş with mountain).

Aside from its wide viewshed, another important aspect of the stele is that its lack of visibility from the central portion of the valley: Dikilitaş and the second stele of the route, Keşlik and its surrounding area, are not intervisible.

Figure 2. Kınık Höyük from the ridge of Dikilitaş, visible to the right of the tree.

Viewshed: Keşlik Yayla

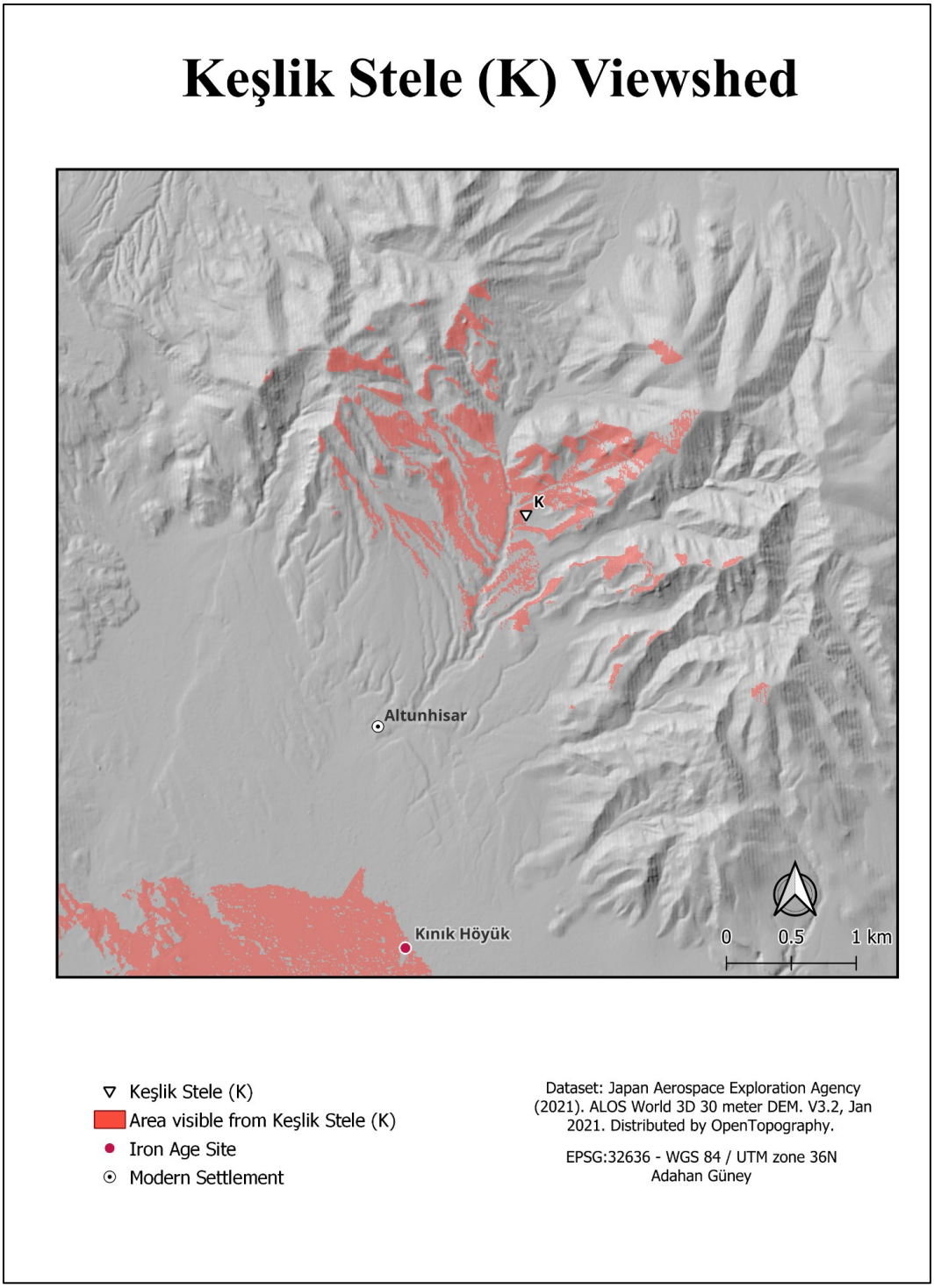


Figure 3

This is the viewshed map of the Keşlik Stele created according to the following parameters via QGIS: Atmospheric refraction: 0.130000, calculate earth's curvature, observer height: 1.6 m. Areas in red mark

the territory that is visible from the stele. This map demonstrates that Keşlik, akin to Dikilitaş, has a wide view range. It dominates the central plateau of the valley and the surrounding mountains. It also provides vision over a portion of the Bor Plain to the south, with Kınık Höyük located at the very edge of the visibility radius (although it is worth noting that from its position the site is barely discernible due to distance). This map also confirms the lack of visibility between Dikilitaş and Keşlik, the latter having a viewshed that starts immediately at the end of the former, and vice versa.

Viewshed: Tavşantepe 2

There is no visibility analysis for the Tavşantepe 2 stele because it lacks a basement and was not found *in situ*, and its original position is unknown. Its findspot is not visible from any of the other stelae of the route, but the area above T2, approximately 100 meters upslope, is visible from T1 (see the areas marked with red in the immediate vicinity of T2 in fig.t1map), therefore it is possible that Tavşantepe 2 was erected in a spot that had direct visual connection with Tavşantepe 1. The area that the stele is found is a narrow pass that connects the main plateau of the valley where Keşlik is located, with a secondary smaller meadow within the valley. The findspot is indicative of a close association with the route, but with the currently available data it is difficult to produce stronger arguments regarding its positioning.

If there are future surveys to be made in attempts to find the basement (and the original position) of this stele, the area upslope that is within the viewshed of Tavşantepe 1 could be a decent starting point.

Viewshed: Tavşantepe 1

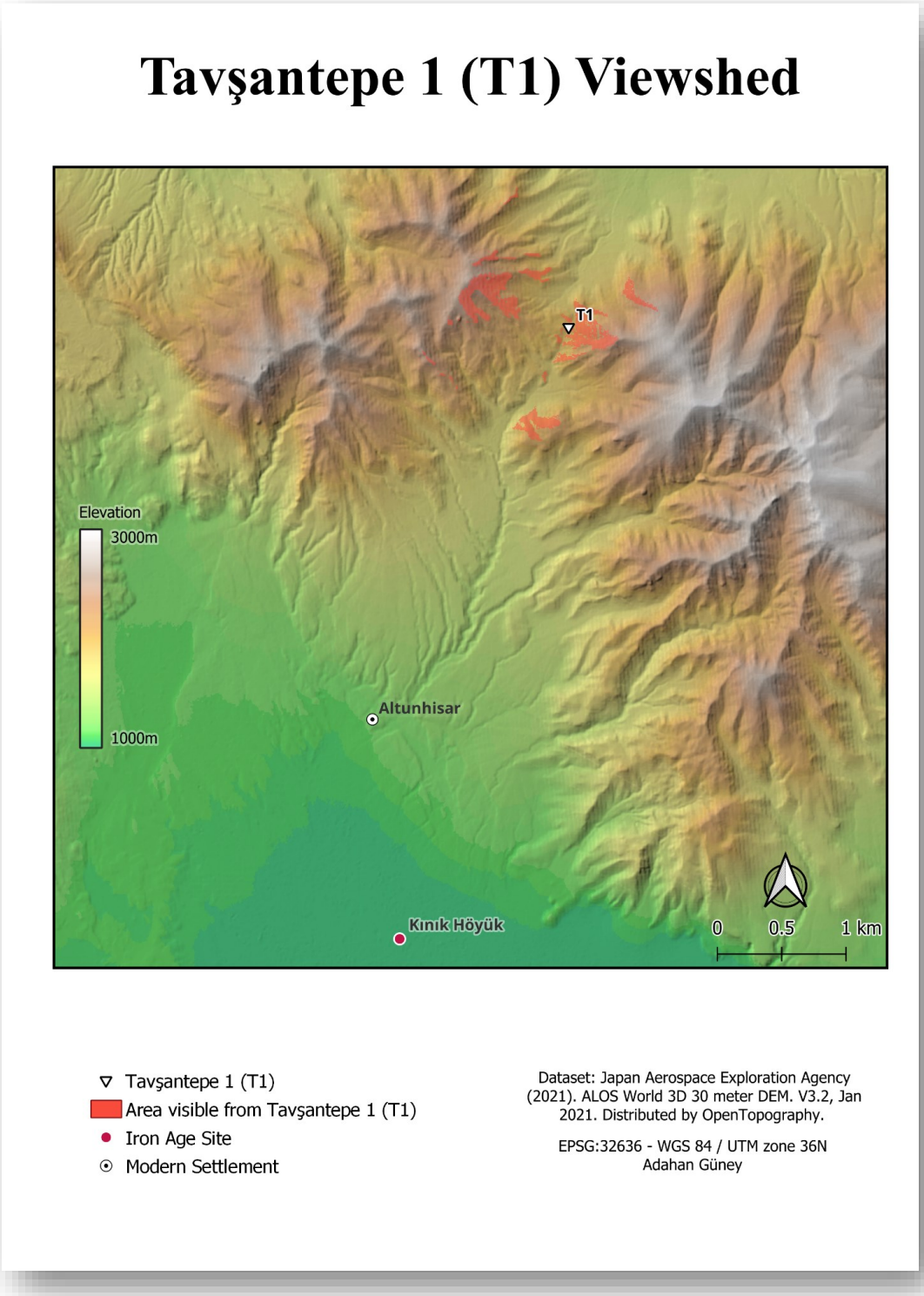
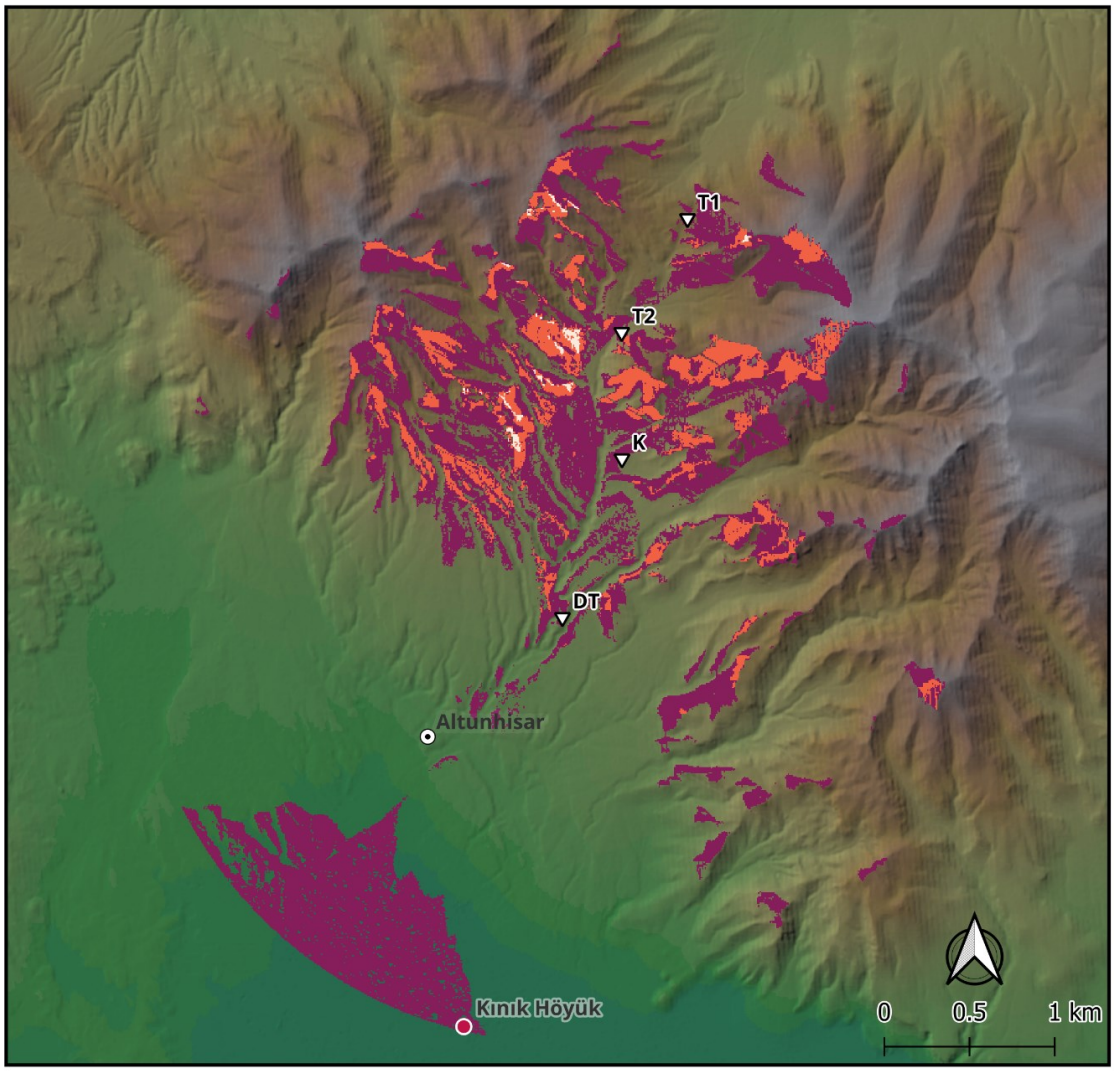


Figure 4

This is the viewshed map of the Tavşantepe 1 Stele created according to the following parameters via QGIS: Atmospheric refraction: 0.130000, calculate earth's curvature, observer height: 2 m. Areas in red mark the territory that is visible from the stele. Located at the exit point of the valley, the stele has a narrow viewshed that only includes the small opening in its immediate vicinity, limited by the mountain peaks that steeply emerge around it. The viewshed does not include any other areas within or outside the valley, except for a small part of the higher slopes of the hill that divides the valley in the center, an area close to where Tavşantepe 2's findspot is located. This map demonstrates that despite having the highest elevation and the biggest dimensions (detailed in Ch.2), Tavşantepe 1 is the least visible stele of the entire valley.

The Intervisibility Network

Altunhisar Valley Intervisibility Network



Intervisibilty

Visible from:
- 1 point
- 2 points
- 3 points

- Stele
- Iron Age Site
- Modern Settlement

Dataset: Japan Aerospace Exploration Agency (2021). ALOS World 3D 30 meter DEM. V3.2, Jan 2021. Distributed by OpenTopography.

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Figure 5. The intervisibility network (cumulative viewshed) of Altunhisar Valley

This is the intervisibility network of all the stelae in the route within a 10 km radius. Together with the Altunhisar Valley Visibility Index (**figx**), the purpose of this map is to identify if the stelae are erected in order to prioritize a visual relationship with any natural landmark around the valley, or if there are any given point(s) that are visible from all of them. In other words, the map is created to determine if there are any areas that act as visual anchor points in the landscape, which would both serve as guidemarks and would also connect the stelae and the route with the settlement of Kınık as a cohesive whole.

The viewsheds of four stelae (that is including Tavşantepe 2) have been demonstrated, with the overlapping areas corresponding with a different color depending on the amount of overlap. Areas within the viewshed of a single stele are demonstrated by purple, areas of overlap between two stelae are demonstrated in orange, and the areas that are visible from three stelae are demonstrated with white. There are no points that are visible from all four stelae of the route. It is important to stress that the viewshed of Tavşantepe 2 has been created according to its findspot, and therefore its area of overlap is tentative. It is included in this analysis based on the likelihood of its original position being in the vicinity of the findspot, therefore potentially having a similar viewshed. Another shortcoming of the map is its limit of 10 km radius, which does not allow one to observe the overlap of the viewsheds of Keşlik and Dikilitaş over the Bor Plain including Kınık Höyük, unlike what can be observed in their separate viewshed maps **(fig.x,y).** This has been a shortcoming of the algorithm that I have not been able to circumvent, and it is important to note the cause of this discrepancy between individual viewshed maps and the cumulative map is due to the radius limit of 10 km in the latter map.

There does not appear to be any spot that is visible by three or more stelae on the valley floor, or any spot that is easily accessible from the valley floor. The areas with high intervisibility are the higher ridges and peaks of the mountains that encircle the valley, particularly the ones that are to the west of its central plateau. Furthermore, all the spots that are visible from three points include Tavşantepe 2 with its rather vague viewshed. There is not a single point that is visible from all three *in situ* stelae, which are Dikilitaş, Keşlik and Tavşantepe 1.

The overlap between Dikilitaş and Keşlik occurs in the higher elevations on the periphery of the valley and a portion of the Bor Plain which includes Kınık Höyük. The almost complete lack of overlap of their viewsheds within the valley floor is noteworthy.

Overall, there isn't a single, distinctive natural landmark or area that all the four stelae are built in visual relation to; nor a single, distinct anchor point in the landscape that connects the entire assemblage together, other than the route itself.[10]

[10] A caveat to this is the river that presumably emerged from T1 and rolled southward into the valley and on to the plain, passing near each of the stelae like the route itself. This is further detailed in the next chapter.

The Visibility Index

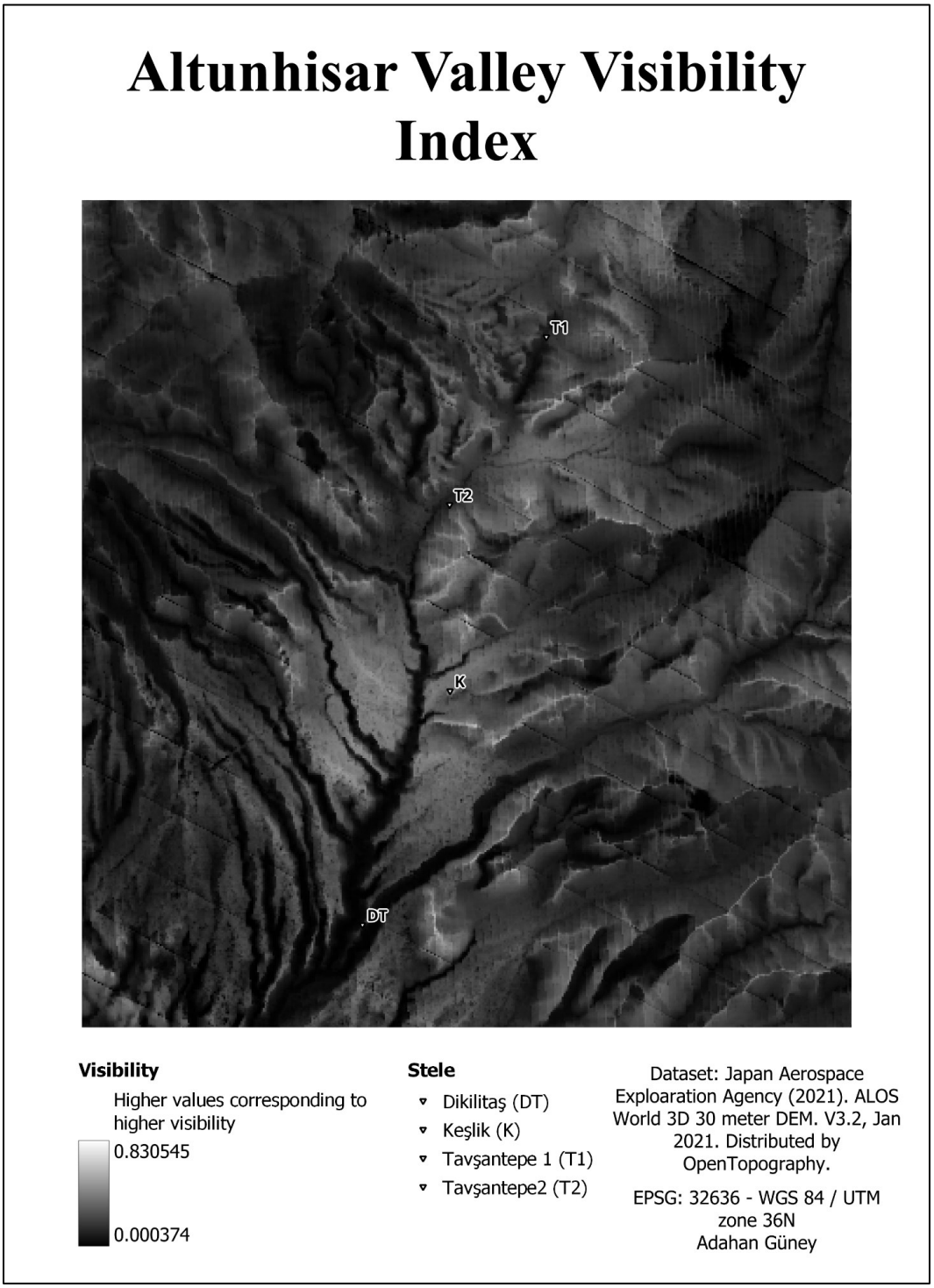


Figure 6

The Visibility Index of the Altunhisar Valley shows the overall visibility of each spot in the Altunhisar Valley from any given position. In this type of analysis the positioning of the stelae are not taken into account. The lighter areas correspond with higher visibility. The parallel diagonal lines visible on the map are due to satellite imagery and are not features of the landscape. The purpose of this analysis is to determine the impact of visibility as a factor in the initial positioning of the stelae.

We can assess from the map that both Dikilitaş and Keşlik are located in the most visible areas of their vicinity; Dikilitaş emerging in the elevated ridge between two gorges to its sides, and Keşlik located on top of the rocky outcrop of Kasımtepesi which stands out from the valley floor it is located in (please see the Visibility Index without the markers (**fig?b**) for the distinct bright spot on the valley floor that is Kasımtepesi).

A stark difference to this pattern is visible on the other *in situ* stele of the valley, Tavşantepe 1, located in an area that is very low on the intervisibility scale. What is particularly interesting is that Tavşantepe 1 is in this position despite having highly visible points in the vicinity, such as the eponymous Tavşan Tepe. The peak of Tavşan Tepe is roughly 700 m north from the stele, commanding the route at the exit of the valley from a position that has visibility over a wide radius that both includes the original viewshed of the Tavşantepe 1, and the plain of Çiftlik to the north (**figs?**), in a fashion that mirrors the viewshed of Dikilitaş. The fact that Tavşantepe 1 is not located at this highly accessible and visible position is one of the bigger questions posed by the Visibility Index.

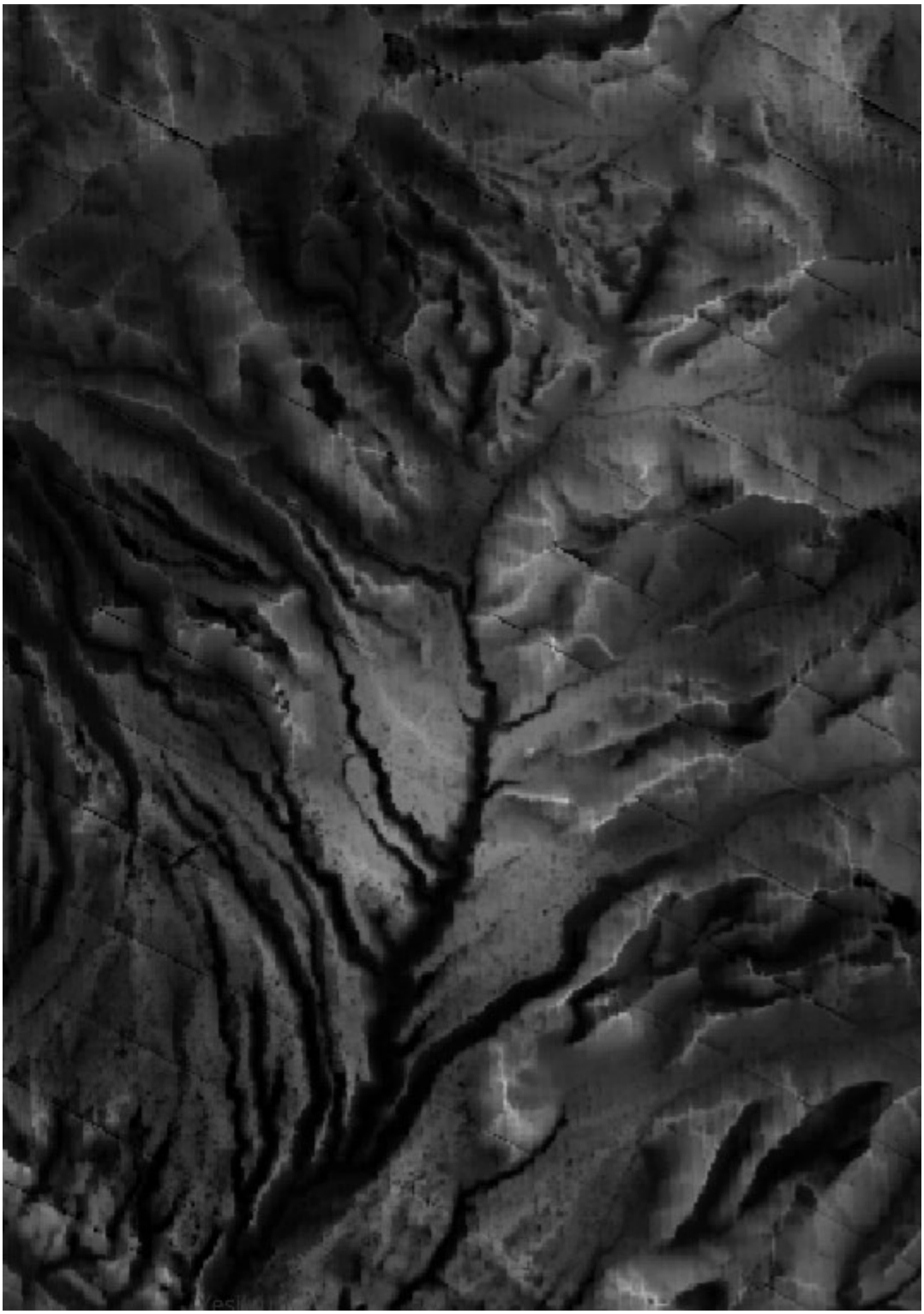


Figure 7. The visibility index without markers.

Figure 8. Tavşan Tepe, seen from south.

Figure 9. The position of T1 stele from Tavşan Tepe to the north. The stele base was located on the side of the route across the tents.

Figure 10. The exit of the valley and the northern flatlands as seen from Tavşan Tepe.

Conclusions/Remarks

Upon inspecting these six maps what immediately jumps out is the difference in the width of viewsheds of Dikilitaş and Keşlik against Tavşantepe 1. The first two are located in extremely visible spots with wide viewsheds, whereas Tavşantepe 1 is almost secluded, or as secluded as could be while occupying the only exit of the valley to the north. If we consider the findspot of Tavşantepe 2, it seems to have been

located in a similar fashion with Tavşantepe 1; in a narrow pass with a limited viewshed (**fig.**vis.index). But (as mentioned above) it is also likely that this stele was located in another spot in the vicinity, perhaps uphill on the slope of the findspot, which would give it a wider viewshed and possibly create a visual line with Tavşantepe 1.

Whether we take Tavşantepe 2 into the consideration or not, I contend that the choice of the location of the stelae of the first two stations on the route depends on different priorities than the last two, and therefore they have different functions, perhaps different dates. Dikilitaş and Keşlik not only have the same emphasis on visibility, their viewsheds complement each other by perfectly filling the gaps in each other's viewshed: On the valley floor, the viewshed of Keşlik begins as soon as one loses sight of Dikilitaş, and vice versa; the two of them function in tandem, always providing the traveler with an anchor point to orient themselves while walking on the route. The similarity in pattern and complementary nature of the viewsheds do not necessarily prove that these stele were built together, nor provide any insight into which of them was erected before the other; but it demonstrates that even if they were not built at the same time, whichever was built later was done so in order to work in tandem with the other, therefore it can be argued that these stelae were in use together for a certain time, which would be at a point during or after late 8th c. based on the dating of Keşlik Stele. Their cultic significance and function will be debated further in the next chapter, but however they functioned, a high visibility seems to be an important component for both of them. A greater visibility puts emphasis on their function as anchor points creating a visual path as effective guidemarks, increases publicity, and may be implicative of collective rituals.

If these are the potential implications of high visibility, how do we then interpret a deliberately low visibility monument on the same route that is counterintuitively located at a high point while also having the greatest dimensions? This question is regarding Tavşantepe 1, which does not have the same emphasis on visibility, while being the most prominent stele of the route in terms of positioning (at the highest point of the valley floor and of the route) and size. This lack of emphasis, in my opinion, could only mean that compared to others, visibility is simply not the primary factor in Tavşantepe 1's

functionality. Therefore, as a landscape monument it must have interacted with a different aspect of the environment.

3.2) The Watershed Analysis

The position of landscape monuments of BA and IA in Anatolia are often defined by their proximity to prominent landscape features, which ancient people vested with a cultic connotation. In my former analysis of the visibility of stelae found in the Altunhisar Valley, it emerged that the position of Dikilitaş and Keşlik may have been chosen because of the wide view range from their site of erection and their visibility for those who walked along the road, from one station to the other. The same criterion does not apply to the next two stelae of the route, and particularly to Tavşantepe 1, whose exact point of erection is more clearly known.
At a first sight a direct relation of Tavşantepe 1 with a landscape feature is not immediately visible.

In order to understand the way Tavşantepe 1 interacts with the landscape, a series of watershed analyses are conducted, inspired by the study on the landscape monuments of the Elbistan Plain by Francesco di Filippo and Federico Manuelli, in a 2022 publication titled "Hic sunt leones. Iconographic analysis and computational modelling for the study of the Iron Age free-standing lions of the Elbistan plain (south-eastern Anatolia)". Investigating how the freestanding lion sculptures interact with the landscape, they have conducted various geospatial analyses, one of which is determining the water basins of the vicinity **FIG.** Water or drainage basins are areas where the water from precipitation is funneled into main outlets via drainage channels. The limits of these basins, which are defined by elevated features of the landscape, are known as drainage divides, and they determine which area will be fed by the precipitation. See the map below for the exemplary study on the Elbistan Plain:

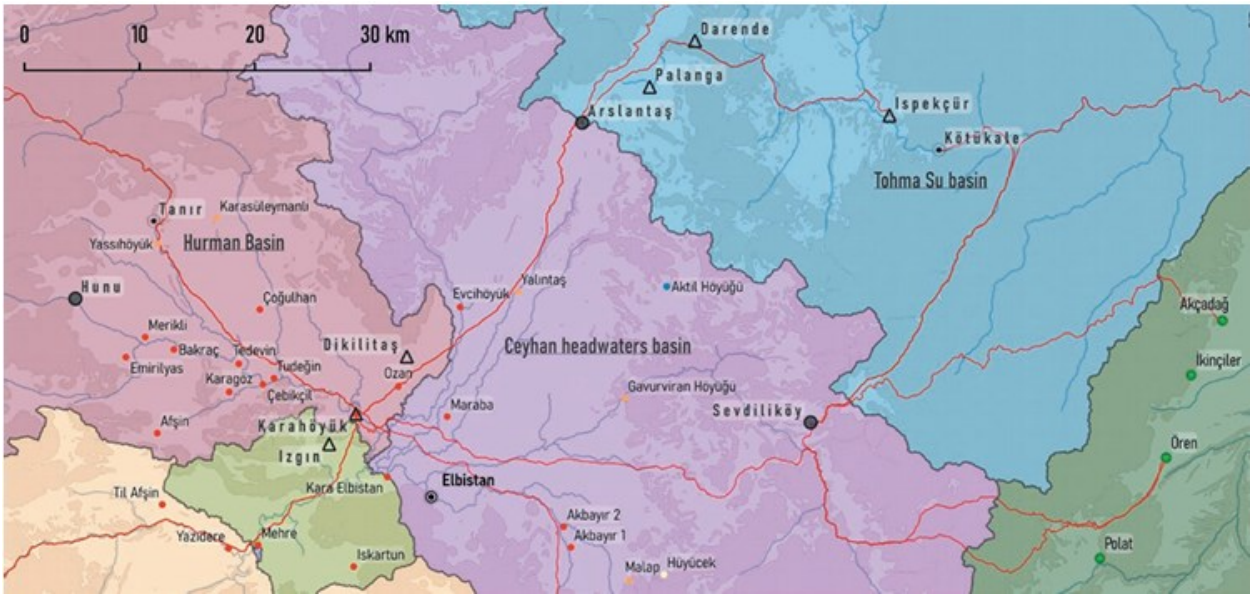


Figure 11. The Elbistan main hydrologic basins system, after Di Filippo and Manuelli 2022. Note the positioning of Arslantaş where the route intersects the drainage divide on a seemingly flat area, between Ceyhan and Tohma Su basins.

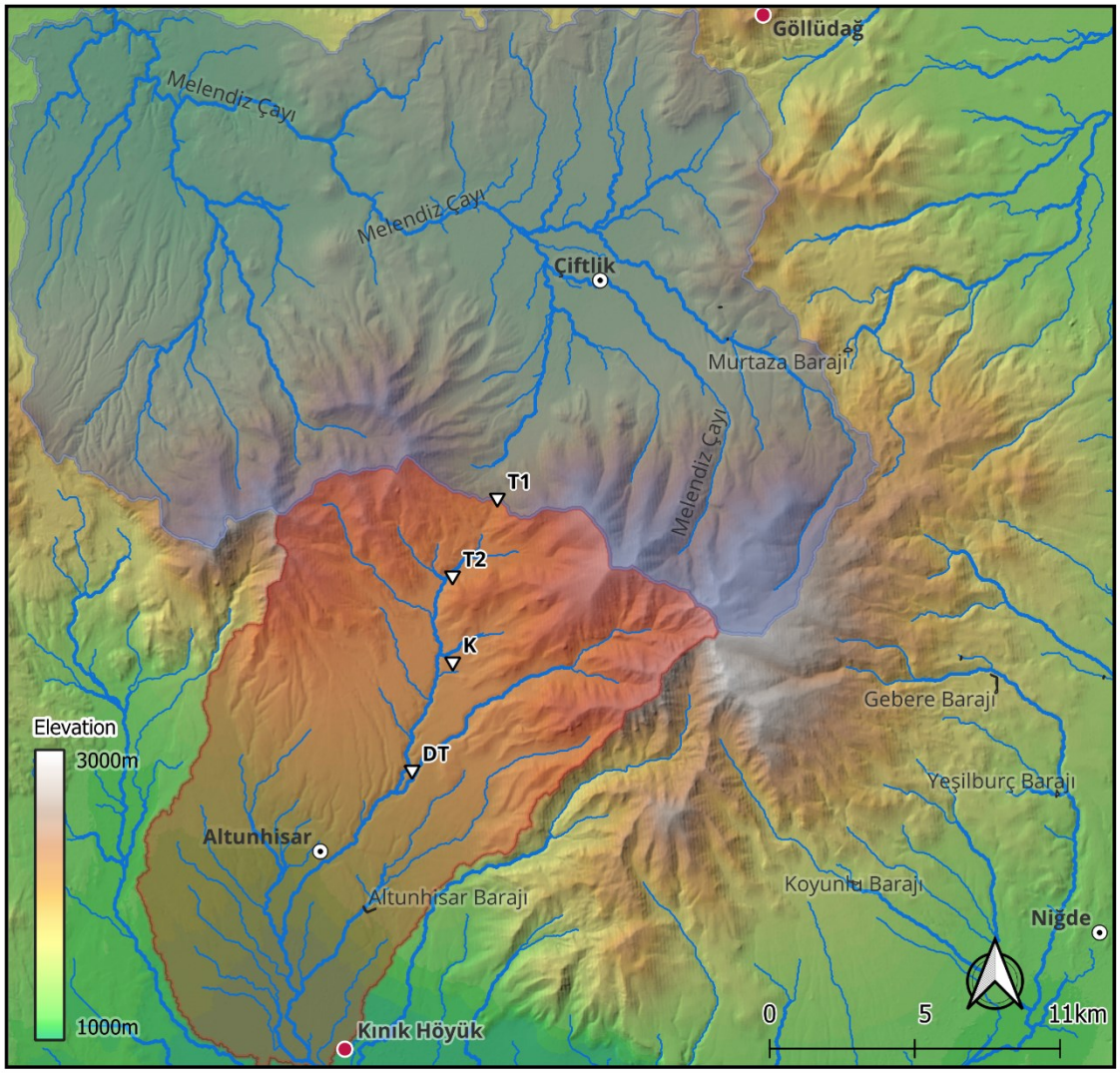
In their study, the authors highlight that the free standing lion-stela Arslantaş is not only located at the point on which the interregional routes converge; it is also located at the highest point of the plain by such a slight difference in elevation that it is nearly imperceptible by the naked eye or by other algorithms that calculate the slope gradient, but it precisely marks a natural border formed by the drainage divide between the major water basins of Tohma Su and Ceyhan, as demonstrated by the map above (Di Filippo and Manuelli 2022, 64).

Based on this observation and on the iconology of the lion figure in Hittite and Post-Hittite contexts **(see below?)**, they argue that Arslantaş, along with other lion monuments of the plain, should be regarded as a proper boundary marker instead of a simple landmark, marking the northern border of the Elbistan plain. This border is not necessarily a political one that indicates an imagined cartographic feature defining the limit of distinct geopolitical entities, but is a cultural one, demonstrating a deep knowledge and awareness of the territory and its natural limits that in turn constitute a well-defined cultural landscape. They argue that the cultural landscape of 1st millennium BCE Elbistan, that is defined by these marked spots where major routes intersect with significant natural features (in the case of Arslantaş, the drainage divide) also correspond with regional borders of the area in 19th c. CE, as well

as the modern administrative borders. Additionally, they bring attention to the potential cultic significance of a drainage divide, stating: "This distinctive environmental trait must have profoundly impacted this place's significance, conferring it a power that persisted across the millennia relating to the use of surface water by local communities." (Di Filippo and Manuelli 2022, 64).

In light of this study, it is possible to put some peculiarities of Tavşantepe 1's positioning into perspective. Tavşantepe 1 is also at the highest point of the valley floor, and in true Arslantaş fashion, the difference of its elevation with its immediate surrounding is by a small margin. The peculiarity of its positioning, as mentioned before, comes from the fact that it was constructed on a low-visibility location unlike the other monuments of the valley despite its apparent prominence, which is especially noteworthy considering the existence of easily accessible and highly visible spots in its vicinity such as the eponymous Tavşan Tepe (see **fig?** Visibility Index).

Altunhisar/Çiftlik Drainage Basins and Channel Networks



- Modern Settlements
- Iron Age Sites
- Stelae of the Route

Channel Network

- Strahler Order 1
- Strahler Order 2

Drainage Basins

- Altunhisar Basin
- Melendiz River Basin

Dataset: Japan Aerospace Exploration Agency (2021). ALOS World 3D 30 meter DEM. V3.2, Jan 2021. Distributed by OpenTopography.

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Figure 12. Hydrologic basin system?? of Melendiz Mountains. Only relevant water basins are demonstrated.

The above map **FIGwatershed** is created via QGIS and SAGA GIS, using a DEM of 30m resolution. In the map two major water basins are visible, namely the Melendiz River Basin to the north of Melendiz Mountains represented in blue, and the Altunhisar Basin that includes the Altunhisar Valley, represented in red. The other minor/major basins of various sizes are omitted from the map in order to highlight the area of interest. 3 orders of drainage channels are represented, each created by a different flow accumulation threshold in order to represent the hierarchy of the drainage network. Primary Channels represent the largest and most significant drainage paths, identified using the highest threshold for contributing flow accumulation. These are the main rivers or streams. Secondary Channels represent intermediate drainage paths, identified using a medium threshold for contributing flow accumulation. They include both main channels and significant tributaries. Tertiary Channels are the smallest and most detailed tributary channels, identified using the lowest threshold for contributing flow accumulation. They represent the finest details of the drainage network, including minor streams.

It is important to note that this map prioritizes the accurate representation of the drainage hierarchy within the Altunhisar Valley, and in the area that is outside Altunhisar River basin the hierarchical representation of channels becomes less accurate as the rank within the network increases. For instance, the Melendiz River and the river that runs out of Altunhisar Valley are represented as equals in rank and therefore size. This is not accurate and in fact, Melendiz River grows as it moves westward and becomes much larger in the area that corresponds with Ihlara Valley at the western border of the map. This, however, is not relevant for the purposes of this research, therefore in this representation drainage channels above a certain size are all treated as Primary Channels.

With these caveats in mind, the **FIGw** is successful in demonstrating that:

1. Tavşantepe 1 is precisely located at a major drainage divide, between two main basins that are separated by the Melendiz and Keçiboyduran Mountains.

2. Tavşantepe 1 is located at the source of the main river that grows southward downstream through the Altunhisar Valley, feeding the northern part of the Bor Plain where modern Altunhisar and ancient Kınık Höyük is located.

Conclusions/Remarks

All in all, these examples show that watershed analysis is a promising tool, in determining natural boundaries that correspond with cultural and cultic limits of a given locality. This is especially true considering the Anatolian landscape, which depends on precipitation for agricultural purposes, as opposed to other forms of agrarian activity. Various Storm-Gods, or holy mountains of different regions and the limits of their area of worship, in other words, the limits of their domain, and the interaction between these spheres of influence could be better defined by investigating the limits of prominent water basins. These drainage divides are also a useful tool in determining points of cultic focus, i.e. holy mountains and peak sanctuaries, that are hitherto undiscovered. Furthermore, this approach has the potential of creating a deeper understanding regarding the sanctity of peaks and sanctity of certain mountains in the Hittite religion, for it implies that what makes a mountain or a peak sacred is not merely its height or proximity to heavens, but it is its ability to affect the landscape by actively deciding the course of precipitation.

The number of examples provided here is not enough to support claims of this scale, or to fully test the limits of this approach. Other landscape monuments and sacred localities of both BA and IA contexts should be investigated. A comprehensive study is both necessary, and beyond the scope of this thesis. This approach can be broadened by taking into account other processes in which mountains affect the weather and climate in a region. Also, there is significant room for growth in the methodology utilized

in this research; the algorithms can be tweaked to provide more accurate and detailed results, and elevation models with better resolution could be utilized. Although elevation models of 30m resolution seem enough for the scope of this sort of analysis which aims at estimating major water basins, some cases could potentially benefit from a finer dataset.

RIVER and monuments at conjunction : here also talk about the current state of the river and potential sources of water that emerge from tavşantepe

Looking into the reconstruction of the stream channels demonstrated in map **FIG?**, the positioning of the monuments seem to align with the river that flows through the valley. More precisely, while the final monument Tavşantepe 1 is located at the source of the river, while the other monuments are located in proximity to the areas where tributaries join the main body of water. Tavşantepe 2 is positioned at a location where the stream from the small valley-like opening to the west joins the main stream of the valley at the narrow pass where the stele is located. Kasımtepesi, where the Keşlik Stele is located, is positioned in between two minor streams that emerge from Melendiz Mountains to the east and flows westward across the pastures before meeting the main branch of the river near the stele. The main body of the river flows southward, and is joined by another larger branch as it exits the valley and flows into the plain. This other branch emerges from another valley within the Melendiz mountains; becoming into its own at the conjunction marked by the ruins of an unexcavated, presumably Byzantine fortress where two minor streams meet with the spring of Cinosman. Dikilitaş is located above the ridge where this body of water meets the one that is coming out of the Altunhisar Valley, where these two streams meet and flow into the plain.

Another possible interpretation of the alignment of the stelae could be that these stelae follow a river instead of a route, marking each major spot where another significant tributary joins the river and bolsters its strength. And the final stele is the one that marks the drainage divide and the source of the river. On satellite imagery it is possible to see dried or semi-dry sources of water that emerge around Tavşantepe 1 **ADD FIG.** Today their trajectory in the area between Tavşantepe 1 and 2 is disturbed by the asphalt road.

And the LCP does not connect with the lines. So this is clearly not the least costly path, but it is the proper one, the one that one must take.

So, all the stele are positioned in a way that relates to the river. 3 near the conjuction points, and one at the very source (drainage divide). Why are they highly visible then? Not to guide the traveller, the traveller can simply follow the river. AAAH. No. To guide the traveller at the conjunctions. So, when you say to the guy, go up there and follow the river, he will be inevitably confused where the river splits. There you follow the monument.

The LCP on the initial portion of the route

Or the river is representative of a cosmos and the each tributary are minor gods.?

LCP and last part of the route: related to the river, you can follow it downwards and talk about the dam and how it destroyed the first portion of the route, not just it but other agrarian activity. Talk about how the monuments need a center, a community, which is Kınık that has visual relation with the monuments etc. Then the lcp, which kinda follows the river, or where the river is now... Its annoying. Don't go in too many details on that one. Just say that it is an approximation and leave it at that, also mentioning that the rockcarved stuff on the valley.

Also Lo hates this stuff but I really should check where rivers converge... For mOAr monuments. Even to the north. Is there an area 3-4 kms away which is also a converging point?

3.3) Chapter Conclusion

The geospatial analysis of the route is comprised of viewshed and watershed analyses. From a perspective of visibility, Dikilitaş and Keşlik form one group, that is defined by large viewsheds that work in tandem and in accordance with one another, as parts of a single unit. Therefore they are either constructed at the same time, or the latter is built in accordance with the one that is earlier. Based on the dating of Keşlik, these stelae were in use together either during or after late 8th c. BCE. Since its stylistic counterpart Tavşantepe 2 is ex situ, Tavşantepe 1 alone represents another type of monument in terms of geographical alignment. It is positioned in a manner that does not prioritize visibility, but at the drainage divide that marks the division between two major water basins, which correspond to two distinct regions. It is also located at the source of a river that flows southward. So far the stelae of the path have been broadly associated with a processional route leading to Göllüdağ that is located north of the Çiftlik Plain. However, this creates a discrepancy with the results of the geospatial analysis regarding the positioning of Tavşantepe 1, since the stele seems to mark the end of the region that is associated with Kınık Höyük and its vicinity, if not the entire Bor Plain. In this reconstruction, Göllüdağ remains distant and foreign, as Tavşantepe 1 strongly excludes Göllüdağ as a feature that is connected with the landscape to the south. Furthermore, Tavşantepe 1's position aligns with its other features that signal prominence, enough to be the end station of a processional route. In fact, precisely the end of a destination, since it is the end of a major region in geographical, cultural and cultic terms. While it is possible that the route led to Göllüdağ, the portion of the road beyond Tavşantepe 1 would not share the cultic significance of which the portion south of it is imbued. It is not a case that north of Tav in the valley leading to today's Çiftlik no sites or cultic statues have been ever spotted.

The results of the geospatial analyses are in support of Lanaro's stylistic dating of the monument that places it prior than 8th c. BCE., both in terms of the discrepancy between the viewsheds of Tavşantepe 1 (and presumably 2) and the viewsheds of Dikilitaş and Keşlik; and in the positioning of Tavşantepe 1, which is indicative of a boundary marker. Dikilitaş, Keşlik and Göllüdağ are dated to a similar period, that is later than Tavşantepe 1 and 2. Therefore, the processional route that initially led to Tavşantepe

1 as its final destination may have changed with the emergence of Göllüdağ and other monuments in the valley, and shaped it into an interregional processional route. But it must be stressed that if the route led to Göllüdağ, then Tavşantepe 1 (and 2) are incorporated monuments, which were initially built for a different purpose, and have a prior cultic significance that is beyond being a station on the road to Göllüdağ.

Based on these, I argue that the valley should be reconstructed in two phases: firstly local (9th-8th c.), and then interregional (late 8th c. onwards). In fact, this broadening of the cultic horizon is reflected in the typology of the later monuments, each of them of different style, attribute and form. Tarhunzas of Keşlik is revered in the entirety of Tabal; not just in the Bor Plain by the kings of Tuwanuwa, but also in Konya-Karaman, up north of the Melendiz from the Salt Lake all the way east to Kayseri. Dikilitaş is a monolith with a stepped altar, which may or may not have Phrygian influence, and even if it has none, its closest comparanda are the other step monuments of Southern Cappadocia, namely Kızıldağ in Konya Plain, and Ivriz 2 in Ereğli at the northern slopes of the Taurus. These are not local developments that are can be limited to northern Bor Plain and these stelae (Dikilitaş and Keşlik) represent an interregionality, which is starkly in contrast with Tavşantepe 1 (and 2) that are characterized by their locality and comparatively limited outside influence, in both stylistic and geospatial terms. During late 8th c., the valley gains an interregional character, and becomes significant not only to the locals who benefit from the water provided by it, but also within a greater hub with more and broader connections with other centers, cults, cultures and polities.

Tavşantepe being a local is also very fitting, considering that drainage divides and precipitation are cults that are intrinsic to the landscape of Anatolia. I also like how much these align with its stylistic analysis. The pre-Hittite storm gods and sacred peaks of Anatolia is telling. It is no surprise that after the collapse newly emerging local cults are based on the features of the landscape itself, like the original ones, as opposed to outside influence.

Today, the traceable portion of the route is limited to the immediate vicinity of Dikilitaş, where there is a road carved into bedrock for about 30 meters of the route. The rest is reconstructed via the monuments which mark the trajectory in relatively equal intervals[11].

Chapter 4: Discussion

This chapter is dedicated to the interpretation of the results of the spatial analyses conducted via QGIS and SAGA GIS.

4.1) Interpreting the Results of Watershed Analysis: The Cultic Significance of Drainage Divides in Central Anatolia

From the first moment I acquainted myself with the monument I have entertained the idea that this monument, adorning this liminal space at the mountain pass between two regions that are otherwise separated by dormant volcanoes, was the marker of a border. This stems from its location and the impression it made on me while traversing the landscape, but not just; it is also the impression I got from the locals of Yeşilyurt and Altunhisar who saw the valley as part of their land, their region. In 4 years I have been working in the region, I have noticed that until Tavşantepe 1, everybody seems to know one another as members of the same community and have ties of various sorts, if not direct kinship. Around and beyond the monument however the relations start to change in a way that is substantial enough for me to notice. Once you pass north of it you infallibly encounter "strangers", shepherds from other villages who stare at you blankly when you tell them "I bring regards from Aunty Niğmet". Tavşantepe 1 has always seemed to me to mark the end of Aunt Niğmet's domain, a local personality not unlike the goddesses of ancient times.

[11] The Euclidean distance between the stelae are as follows: Dikilitaş – Keşlik 4 km, Keşlik – Tavşantepe2 3 km, Tavşantepe2 – Tavşantepe1 3 km.

The watershed analysis now supports the division of the lived space of the mountains by today's local communities. The research on Arslantaş brings forth the idea of a non-political[12] boundary marker that marks cultural boundaries. What is absolutely exhilarating for further research is the possibility of these boundaries corresponding with a specific geographical feature that we can easily and measurably access.

Tavşantepe 1 is located at a drainage divide, and it features a divine figure. Beyond it, the precipitation feeds different rivers and different fields, which belong to different people. She sits on the border, she sits on the lion[13] and decides. The people of the northern Bor Plain and Altunhisar Valley are not necessarily beholden to any god that are located further north from the goddess, because those gods are not the gods of their land. They bring abundance to people of other landscapes, other communities. Only the precipitation that falls south of the goddess feeds the plain, which effectively marks the limits of a community, tied together by common interest, common region, common gods. Drainage divides are the natural borders of local cultures and local cults, beyond which a variety in cultic and cultural practices are not just expected, they are almost mandatory; since after a drainage divide the landscape changes, and more importantly, the weather changes.

Drainage divides are particularly relevant for the landscape of Anatolia, as opposed to other areas of the world where agriculture is not directly dependent on rainfall. For instance, Egypt provides a different model, where precipitation occurs in the Ethiopian highlands too far to observe, and the agrarian activity is tied to the flooding patterns of the Nile. Accordingly, the Egyptian pantheon is not led by a

[12] In ancient societies the cultic and the political spheres are intertwined to a point where the attempt to disentangle them is almost always futile. The use of "non-political" here is not to disregard the expression of a will of the community in the erection of the stele, nor is it used to disregard the potential strategic or economic importance of this said border: It is only used to underline that in some cases the will of the community may be expressed in strictly cultic terms, marking the limits of a land that are not based on artificial political relations with other communities, but based on the actual landscape that they use and live in. These are, for lack of a better word, "natural" borders of this community, unpressed by any other political entity, at its cultural extent. This extent is limited by natural geographical features, which are created and kept so by an authority that could only be divine. Hence the border is drawn by divine authority. These borders very often (but not necessarily) correspond with political borders, but at the moment of its conception this border and its boundary marker were likely formulated in "non-political" terms.

[13] See Ch? for details on the lion iconography.

god of storms and rain.[14] Likewise, a similar argument can be made for the gods of Mesopotamia, perhaps with the exception of Hadad, and even Hadad is a later development and its worship is seen to a lesser degree in Lower Mesopotamia, where prosperity is tied to rivers, which are fed by the precipitation that occur on a distant, unobservable land. In the mountainous landscape of Anatolia precipitation has been[15], and still to this day (**fig.rainPrayer**), crucial for prosperity and agricultural abundance[16]. In Anatolia, the supreme deity is a god of storms, which is either accompanied by a female figure of agrarian fertility, or in some cases the Storm-God is one that incorporates both the rain and the resulting prosperity, as can be attested in the IA Tarhunzas of southern Cappadocia. Furthermore,

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[14] A caveat being association of bulls with pharaonic rule. The bull iconography is used for pharaohs, and bulls are largely associated with gods of storm and labrys, see Minoan Crete, Zeus Labraundas, Teshub, Tarhunzas, Jupiter Dolichenus... For the pastoral origins of this pharaonic representation see CITATION. This is likely a remnant of the pastoral origins of the Egyptian Civilization, kept intact from a time where Green Sahara was popping up and the settlements were not as dependent on the Nile. On the topic see:

[15] Regarding the sacred peaks where Storm-Gods reside, and the long standing existence of these cults in pre-Hittite Anatolia, Massa and Osborne state: "...That such beliefs derived from long-standing Anatolian traditions is indicated by the presence of Mounts Daha and Šarpa already in the Old Assyrian tablets from Kültepe, the Middle Bronze Age trading post of Kaneš." (Massa and Osborne 2024, 41; with literature therein).

[16] A note has to be made on Kızılırmak, the biggest river of Anatolia, known in ancient times as the River Halys and the River Marassanta that marks the Hittite core region. This river does not alleviate the rain dependency of Central Anatolia in the slightest, due to the fact that its chemical composition makes its waters unsuitable for human use and for plant life. A report by the MTA (General Directorate of Mineral Research and Exploration) published in **195?** details the chemical composition and suitability of usage mainly of Kızılırmak but also some of the other major water sources in Central Anatolia. It is published as part of the measures that were being taken by the Turkish government in order to solve the water crisis that was prevalent in the region due to the scarcity of usable water sources. According to the report, the geomorphology of the landscape causes Kızılırmak to be extremely rich in chlorite, sodium and sulfate. They include an abundance of other water sources in their chemical analyses, they underline that their results largely correlate with the toponyms given to both Kızılırmak and its major tributaries: Kızılırmak translates as the "Crimson River" and the name is given due to the coloration of its highly sedimentary murky waters; a feature which is no longer observable with the same intensity due to the regulation activities and multiple modern dams which act as large sieves at irregular intervals. The ancient name Halys refers to its saltiness. Keeping in mind that the word for "bitter" in Turkish is "acı", here is a list of some of the major tributaries of Kızılırmak: Acısu (Bitterwater) east of Zara, Acı Irmak (Bitter River) south of Hafik, Acısu and Acıçayır (Bittermeadow) at Şarkışla, Acısu at Gemerek, Acısu west of Nevşehir, Acıöz (Bittercore) fed by Mucur and Hacıbektaş, Acıçay (Bittercreek) of Çankırı. Added to this list are other tributaries and water sources that do not have it in their names, but are equally if not more bitter and unsuitable for agriculture. For the extensive list and the detailed chemical compositions see **CITATION.**

This is not to claim that there are no water sources in Anatolia that are suitable for agriculture; only that there is no major singular waterway that function similarly or is comparable with the rivers of Mesopotamia or the Nile. That and due to the geomorphology, a decent amount of underground water sources in Central Anatolia have a tendency to be rich in sodium and similar components that make them unsuitable for consumption, agricultural activity and in some cases even unsuitable for washing clothes. **CITATION**

This situation is certainly one that increases the dependency for both the precipitation and the relatively short-range surface streams and rivers that are directly fed by it, i.e. the water that is coming down from the mountains.

in Hittite religion there is not a single Storm-God, they are various and plenty; Storm-God of Nerik, Storm-God of Arinna, Storm-God of Kummanni, of Zippalanda, Malizi and more. These regional gods, mostly tied to a city but presumably also the area associated with that city, rule over a cultic landscape that is divided into territories by "divine authority". I argue that this is felt and observed by the people mainly through precipitation; where it falls, which rivers it feeds, which land it prospers. Furthermore, there are the holy mountains and sacred peaks to be considered, in both BA and IA contexts. These are also revered on a regional basis, and often associated with Storm-Gods or even directly with precipitation (elaborated below).

Figure 13. "Yağmur duası", a prayer for rain held in the Yakacık Village of Altunhisar in 2017. Notice the overturned hands imitating downpour. The image taken from the website of Altunhisar District Governorate (Kaymakamlık): http://www.altunhisar.gov.tr/yakacik-koyunde-yagmur-duasi-yapildi

In order to test the extent and applicability of these ideas, I have conducted similar, albeit less in-depth watershed analyses in two different regions. I kept the research preliminary and as brief as possible in order to avoid deviating too much from the main topic of this thesis, but regardless I think this is a necessary detour. The first area I have selected is the area of Oymaağaç-Nerik, a prominent BA cult center near Vezirköprü located north of the Central Anatolian Plain. Nerik is selected as a suitable case study for multiple reasons. The main reason is that there is an abundance of textual evidence detailing Nerik; its cults and its region, perhaps the most relevant of which are the ones regarding the holy mountain Zaliyanu. Additionally, Nerik as a BA site provides a good comparison with Arslantaş and Tavşantepe 1, which are EIA monuments. The other case study is Karadağ, the IA sacred peak associated with Hartapu and Türkmen-Karahöyük in the Konya-Karaman Plain of South-Central Anatolia. Karadağ is selected because it is an IA sacred space of Southern Anatolia, as Tavşantepe 1, and it is more akin to conventional sacred peaks of BA compared to Tavşantepe 1 and Arslantaş; which are not located on peaks but on saddles between them, along major routes.

Nerik

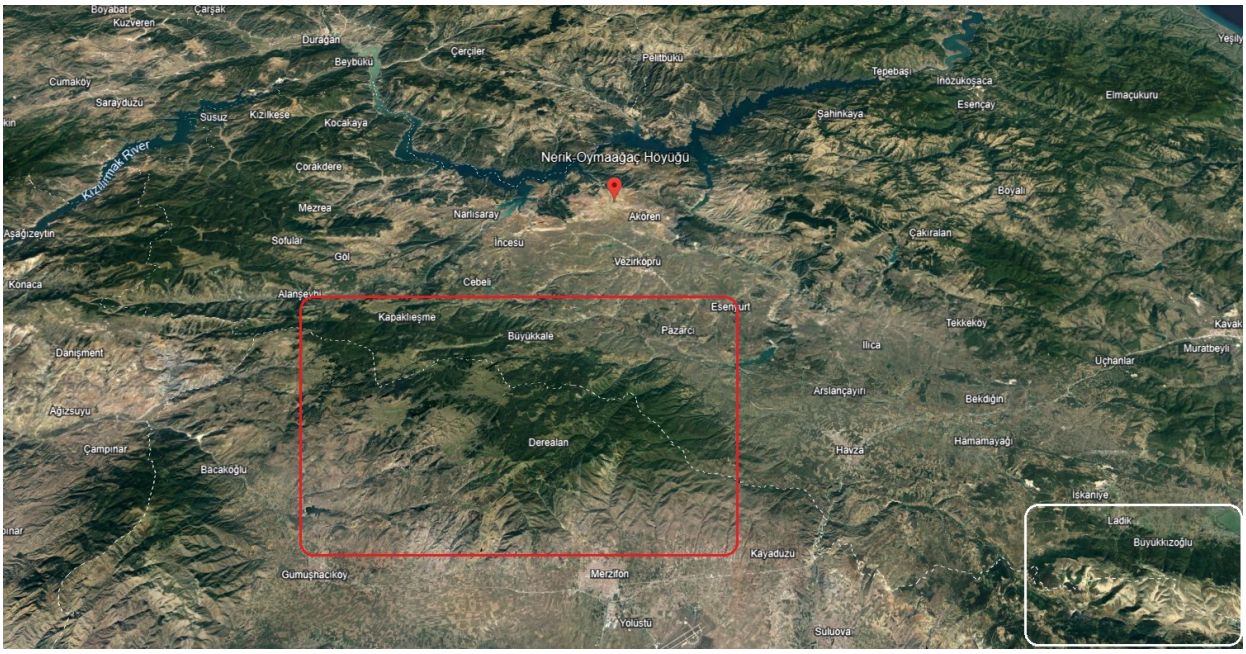

Figure 14. Region of Nerik. Tavşan Dağları marked with red, Akdağ range marked with white. Image taken from Google Earth.

Nerik has holy mountains, and ample textual evidence detailing the cultic activity. Furthermore, the region of Nerik is relatively well established, even before the identification of the site with Oymaağaç; based on the records of military campaigns, and by various myths and texts detailing cultic practices which refer to geographical features. Although there were varying opinions on the exact location of the site[17], its regional borders were more or less established based on textual evidence **(fig?)**. As Macqueen puts it:

"...I cannot help feeling that the area described by these authors, situated as it is just north of the range of the Tavşan Dağ, which formed the boundary between Classical Phazimonitis and Amaseia, and which may well have previously been the boundary between Hatti and the Gasga-country, fulfils all the requirements which are necessary for the identification of the Nerik region." (Macqueen 1980, 185).

[17] Güterbock suggested Kargı based on an aetiological interpretation of the text KUB 36.89 rev. 11–14 (Güterbock 1961, 92–93), Macqueen suggested Havza (Macqueen 1980).

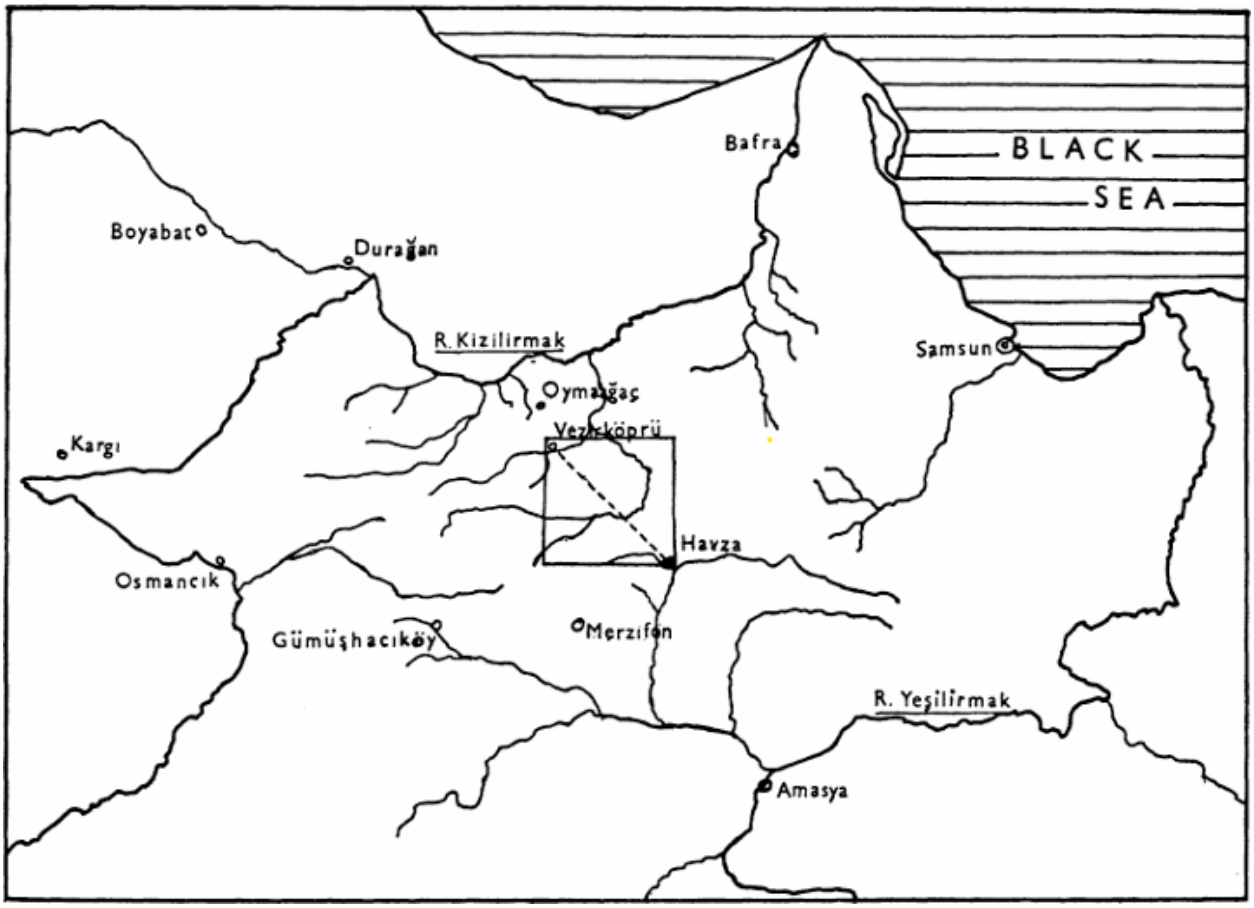

Figure 15. Map of the area referred by Macqueen, with tributaries of Kızılırmak and Yeşilırmak. After Macqueen 1980.

A fundamental question on the identification of the region was (and still is) regarding the location of holy mountains associated with Nerik, namely Zaliyanu and Haharwa. Zaliyanu is a prominent god for the nearby city of Kastama. Although the exact location of Kastama is currently unknown, according to Corti it was located at a position from which Haharwa is visible (Corti 2017, 224). Despite this association with Kastama, Zaliyanu is also known as the mountain that brings rain to the town of Nerik, as stated in KBo 3.7 (CTH 321.A) ii 21′–24′:

"Mount Zaliyanu is first (in rank) among all (the gods). When he has allotted rain in (the town of) Nerik, then the herald brings forth a loaf of thick bread from Nerik." , after Beckman (2013, 154).

Güterbock has argued that Haharwa could have been a mountain range, and Zaliyanu a peak within that range (for details of the argumentation see Güterbock 1961, 94). On the exact location of these mountains various scholars have differing opinions. Corti suggests the Akdağ Mountains for the location of Zaliyanu based on the proximity to the hypothesized location of Kastama near Ladik (Corti 2017). There is more of a consensus regarding Haharwa mountain range, which is considered to be Tavşan Dağları by Corti, Beckman and Macqueen; but Bahar, referring to the text KBo 16.81 argues that Tavşan Dağları is too long a distance from Oymaağaç-Nerik (roughly 20km) for the statue of the Storm-God to be brought and taken back within the same day (Bahar, Turgut, and Küçük 2018, 411-412).[18] They suggest Adatepe instead, a hill with traces of BA occupation 4 km southeast of Oymaağaç, as a more suitable candidate.

I have applied the Fill Sinks (Wang & Liu) algorithm using SAGA GIS, in an attempt to test if drainage divides could be utilized in order to identify holy mountains associated with Nerik, and if these divides would also provide a border that would correspond with the borders of the Nerik Region that is previously estimated based on textual evidence.

[18] Please note that Karadağ is x kms away from Türkmen-Karahöyük, Tavşantepe 1 is X kms away from Kınık Höyük, Arslantaş is X kms away from Elbistan-Karahöyük. The distances are Euclidean. All of these sites of cultic focus are major drainage divides, and they are all located in a similar range with their respective centers. On the basis of distance, the identification of Haharwa with the divide of Tavşan Dağları is not unfitting.

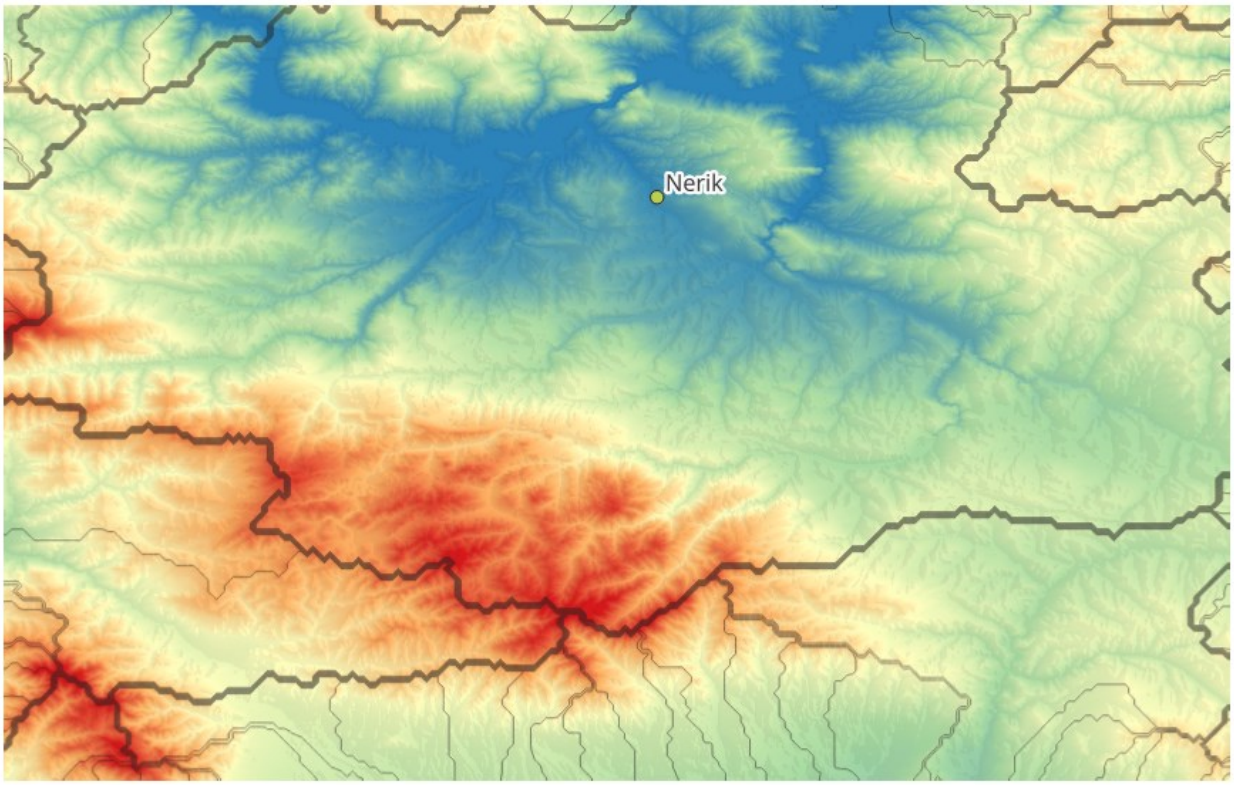

Figure 16. The water basin of Nerik and associated drainage divides, demonstrated on a DEM of 30m resolution. Dataset: Japan Aerospace Exploration Agency (2021). ALOS World 3D 30 meter DEM. V3.2, Jan 2021. Distributed by OpenTopography. https://doi.org/10.5069/G94M92HB. Accessed: 2024-08-23

The map is created by using a DEM of 30m resolution, that includes the area associated with Nerik, based on the area of the map (**FIG?**) provided by Macqueen. The map is preliminary and lacks detail. The lines indicate drainage divides, the limits of major water basins. The drainage channels are not indicated. It demonstrates that the water basin of Nerik corresponds with the region of Nerik that is estimated by the study of textual records. Furthermore, the mountain range of Tavşan Dağları, which is largely associated with the sacred Haharwa (with the exception of Bahar etal.2018), constitutes a drainage divide, separating the basin (and the region) of Nerik from the Hittite core region. Additionally, the argument of Güterbock regarding the holy mountain Zaliyanu being a peak of the Haharwa mountain range really shines in this representation, since Zaliyanu is "first in rank amongst all gods", and it "brings rain" to Nerik. In other words, it is the highest peak of the mountain range that constitutes a major drainage divide. Abundance in Nerik is tied to the precipatory activity "caused by" Mount Zaliyanu.

On this basis it could be argued that Haharwa marks the region of Nerik in geographical, but also cultic terms. It is sacred to the towns within this region (like Kastama) because it is associated with the precipitation that occurs within the region, which is even more apparent in the case of Zaliyanu. Any precipitation that occurs beyond Haharwa (and presumably Zaliyanu) is of no direct concern to the people of Nerik Basin. The borders of water basins are divine borders, and within each divine border different divinities rule.

Karadağ

This case study is very brief, both due to the lack of textual evidence, and to the fact that Karadağ is already established as a sacred peak. On its summit, in an underground passage below the ruins of a Byzantine church a hieroglyphic Luwian inscription (KARADAĞ 1) is found; a dedication to the divine mountain and the celestial Storm-God by the Great King Hartapu (Massa and Osborne 2024, 36). Based on this (and another inscription, KARADAĞ 2), the peak is associated with Türkmen-Karahöyük (**fig,viewfromsite)**.

I have conducted the same algorithm in order to estimate the water basins of the region. A map **(Fig?)** of the region with major water channels and pre-Hellenistic sites created by Michele Massa (Massa et al. 2020, 51) is added in order to demonstrate the location of Karadağ with relation to waterways.

Figure 17. Kızıldağ, marked by right arrow, and Karadağ's Mahalıç peak, marked by left arrow, viewed from Türkmen-Karahöyük. The image and the description taken from (Massa and Osborne 2024, 40)

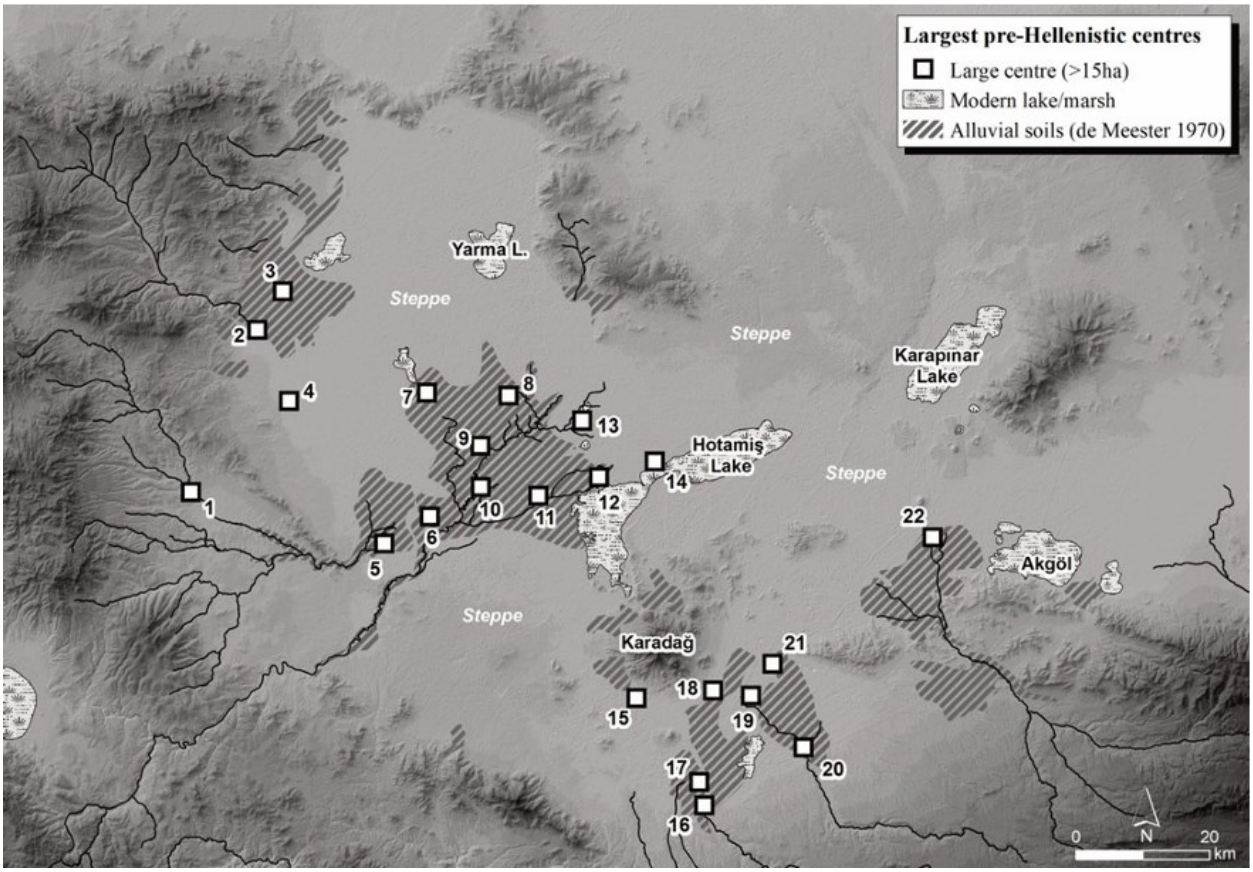

Figure 17. The pre-Hellenistic centers and channels of Konya Plain. Image taken from (Massa et al. 2020, 51)

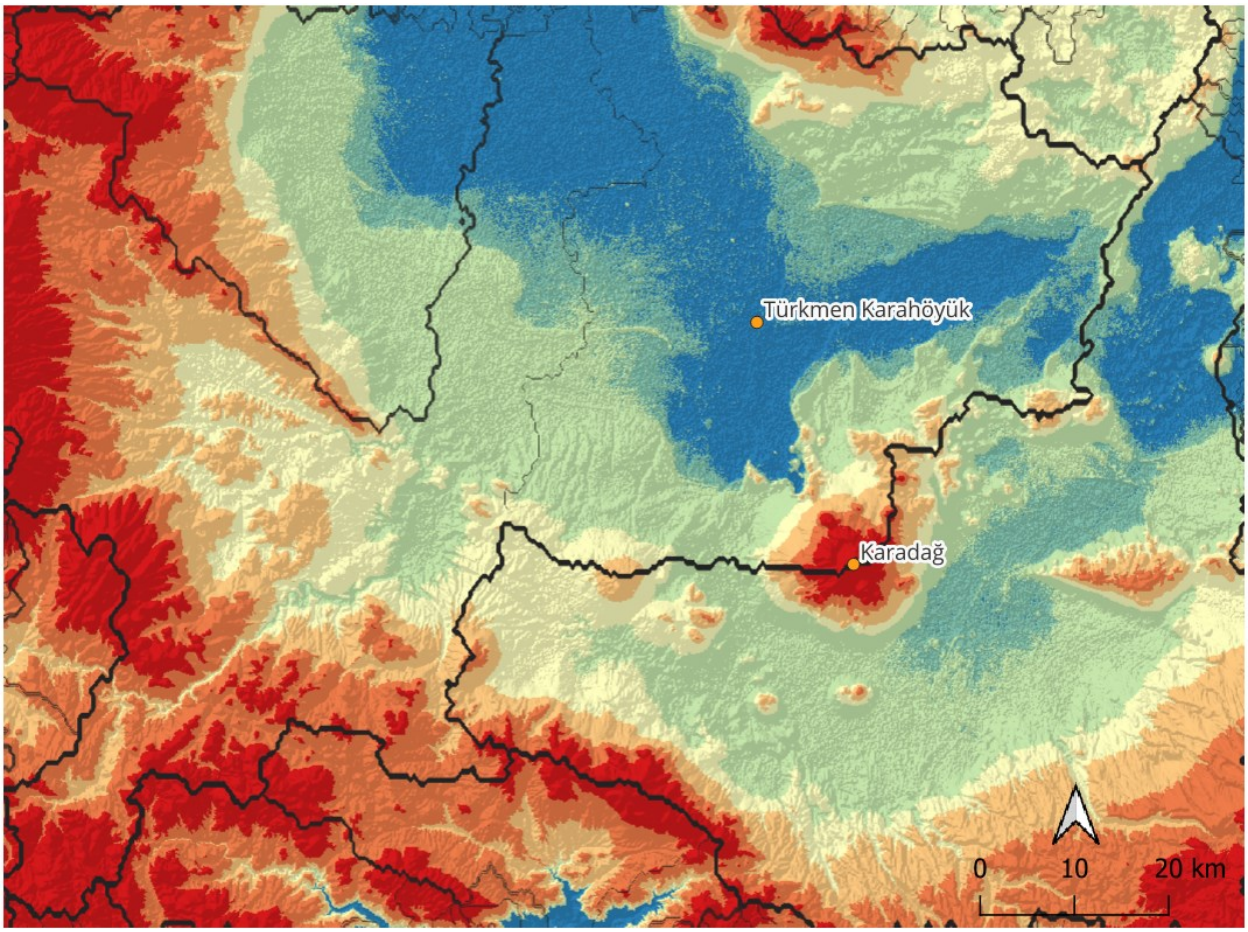

Figure 18. Water basins of Konya-Karaman plain. Created by using a DEM of 30m resolution. Dataset: Japan Aerospace Exploration Agency (2021). ALOS World 3D 30 meter DEM. V3.2, Jan 2021. Distributed by OpenTopography. https://doi.org/10.5069/G94M92HB. Accessed: 2024-08-23

As can be seen from the maps, Karadağ is located at a drainage divide (**fig?**), and this divide separates the two regions of Konya and Karaman into distinct hubs that are formed around rivers of different origin (**fig?**).

Furthermore, Karadağ being located on a drainage divide provides another interesting parallel with our valley. MassaOsborne**CITE** argues that Karadağ is the end station of a processional route that begins from Türkmen-Karahöyük, passes through Kızıldağ (there are monuments there) and ends at Karadağ. In that regard, Karadağ provides a secondary example of a processional route that ends at a drainage

divide in IA Southern Anatolia. The point in which these routes differ is that in the case of Altunhisar Valley, the route ends not at a peak but at a saddle, whereas Karadağ is more conventional as a sacred peak, in the Altunhisar Valley the route ends not at a peak but at a saddle. Although it is difficult to reconstruct Arslantaş in a similar manner, it is worth noting that on the route to Arslantaş there is another monument, also named "Dikilitaş", an aniconic monolith with ? height. Very little is known about it otherwise, including its date. Whether it served as a guidemark with high visibility on the route to the lions or if it had any other function perhaps as a cultic station is difficult to say. Including Arslantaş, there are at least three monuments (or places of cultic focus) that are located on drainage divides in IA Anatolia. In the southern portion of the plain these likely correspond with processions that end on drainage divides. In the east it is not possible to reconstruct a processional route, but the existence of another monument on the path is noteworthy. We see that two of these monuments, one south (Tavşantepe 1) and one east (Arslantaş), are located on saddle points. These are the monuments securely dated to EIA. Lions are ?date. Although Karadağ was certainly in use during IA, it is not possible to rule out or confirm its usage during BA, since the military operations on the mountain make it inaccessible for research. It's cultic significance may have very well derailed directly from BA traditions regarding sacred peaks, and the whole sanctity of peaks "schtick" may have been related to the drainage divides. The watershed analysis of BA Nerik is in support of this argument. This would explain the different location of Karadağ's final station.

The sanctity of peaks are, sensibly, associated with elevation. However these results imply that what makes peaks divine, holy, sacred in Hittite and Post-Hittite religion, cannot be understood by the elevation alone. Perhaps all sacred mountains, whether they are worshipped as themselves or as the abode of local Storm-Gods, are sacred not necessarily because they are high, but because they are high enough to effect water use in some way, shape, or form. The sacred natural landscape features in Hittite religion are considered to be either peaks, or places with an association with water; ponds, springs, rivers etc. Perhaps a review of this perspective is possible, considering that the peaks may be sacred due to their association with water. Perhaps we can simply state; in Hittite religion, water is sacred. The sanctity of a natural landscape feature comes from its association with water.

4.2) Final Remarks

This thesis demonstrates that T1 has all the elements required for an end station of a processional route; and that the valley has cultic significance beyond being a route to the potential sanctuary at Göllüdağ. I showcase that the valley is likely where the cults of Kınık are represented as the designated sacred area, similar to an open air sanctuary, attested by the diachronic addition of new deities. The sanctity of the valley is strongly related to hydrological features of the landscape, mainly the river and the drainage divide that gives birth to it. This is the same source of the sanctity of mountains in Bronze Age Hittite religion, and in that regard this valley presents a direct continuity from BA Hittie practices.

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