LOCAL AND GLOBAL PERSPECTIVES ON MOBILITY IN THE EASTERN MEDITERRANEAN

Edited by Ole Christian Aslaksen
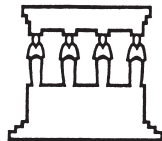
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Color, materiality, sensory experience and Late Bronze Age burials in the Argolid

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One aspect of tombs and burials in the BA Aegean in general that has not received much notice is that of color (hue and shine). Were certain hues more predominant than others? Was this significant? Was the presence (or absence) of shine of importance? Following a discussion of 'what is color?', the study and results of the colors of the finds from Late Bronze Age tombs at three sites in the Greek Argolid, Asine, Berbati and Dendra, are analyzed, followed by a brief review of the theoretical background used here regarding symbolism, materiality and agency. This theoretical structure and the aspect of possible color symbolism are then combined with the material objects and in specific with the color analyses to determine whether this method could 1) offer broader interpretative possibilities for understanding displays of hue and shine and 2) add other dimensions beyond the conventional interpretations of anthropocentric shows of kinship, status and power in LBA Argolid burial contexts. The aspect of local and global is discussed. The study ends by presenting a scenario of a hypothetical Aegean Late Bronze Age burial incorporating these and other sensory aspects. [1]

Introduction: The background and aims of the study
My interest in color arose from my studies of tin-covered vessels[2] when I realized that many vessels, simple and complex, slipped, monochromed or painted, found only in rich LBA III tombs on Crete and on the mainland were completely covered with strips of tin foil.[3] Further, I discovered that roughly half of the tin coating would have had the original color (i.e., they would have been shiny and

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2. See, for example, Gillis 1996; 1999; 2004.
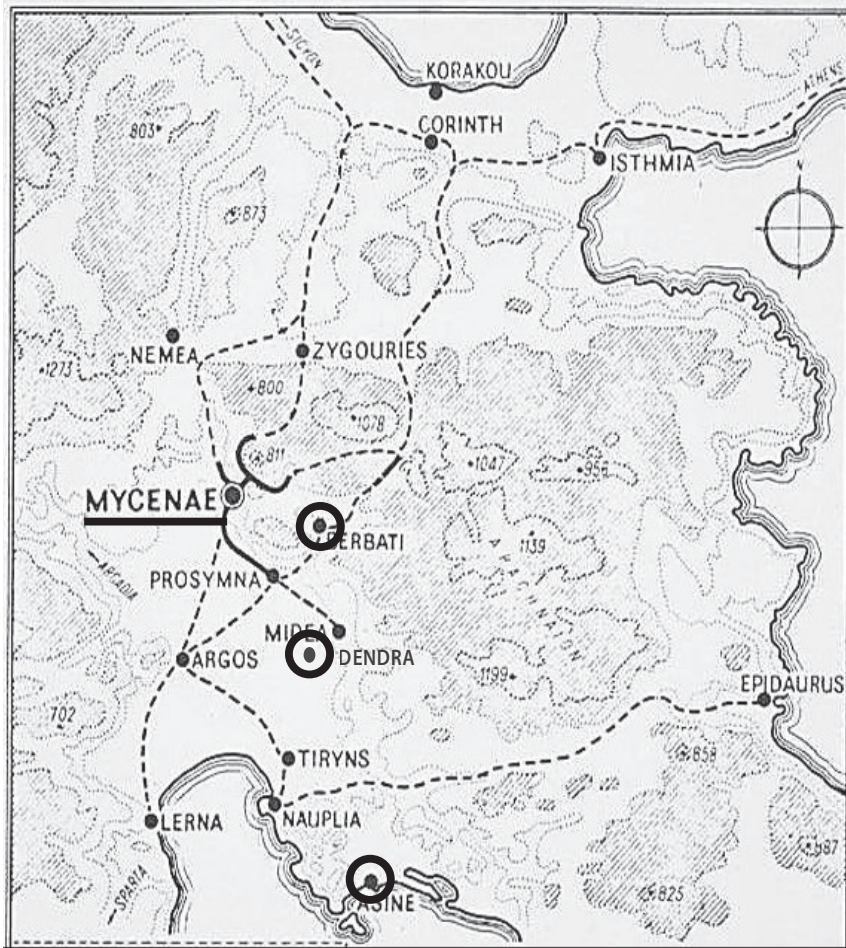3. Gillis and Bohm 1994.

Fig. 1: *Map of the Peloponnese in the Bronze age, showing the principle sites mentioned in the article: Asine, Berbati and Midea/Dendra.*

silvery), and half would have had a golden hue, the result of deliberate oxidation.[4] One obvious question at the time was 'why cover a pottery vase with foil at all', especially since some vase forms which never appeared in solid metal were tinned: clearly, the purpose was not to trick viewers into thinking they were solid gold or silver - and what would be the point of changing the hue in half of them.

A combination of this initial interest in tin-coated vessels in grave contexts and the question of why they were treated thus led to further studies of colors in general in these graves: understanding the use of color might provide more

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4.   Gillis *et al*. 1995; Gillis 1999, 291-94.

insight into its possible symbolism and significance for the Aegean Late Bronze Age people. I decided to examine not just tin-coated vessels, or just metal objects, but to make a study of the colors of the grave goods from LBA tombs. As a pilot study I looked at the published chamber tombs (ChT) from Asine[5] and enlarged the study to include the ChTs from Berbati and Dendra[6] (Fig. 1) to see whether or not, and possibly how, choice/use of color in its wider meaning might add new information to the understanding of Late Bronze Age Argolid burials.

In this present work, the results from the previous studies regarding the colors of the grave gifts will be viewed again through the perspective of materiality and agency. After a discussion on 'what is color', and different approaches to understanding it, a review of the three sites Asine, Berbati and Dendra (the studies mentioned above) and the results of the studies comparing the finds vis-à-vis color are briefly presented and discussed. The next section concerns color and materiality, with first a discussion of symbolism, continuing with materiality and agency as theories and their applications to this study, followed by a discussion of possible color symbolism. The matter of 'local-global' is taken up. Finally the conclusions are incorporated into a hypothetical scenario of a burial in the LBA Argolid. Let us begin with a discussion of 'color'.

Color

Color is all around us, affecting our lives both consciously and subconsciously and can be studied in many different ways: among them, the biology of seeing and perceiving colors, their psychological and psycho-linguistic applications (including their reception, a large area in marketing and PR).[7] One of the more common areas of color research in antiquity lies in the general field of linguistics, language study, semantics, etc., based on the use of color terms in texts and inscriptions, from Linear B through Homeric Greek to Hellenistic and Latin texts. These terms are studied for their etymology, their 'real' meanings in their literary contexts, their shifting connotations, their social implications, and so on.[8]

Non-linguistic aspects of actual color - its uses and possible meanings in ancient contexts - have not received much attention in the archaeological literature until very recently, and are still somewhat uncommon: there have been several conferences, some volumes devoted to the subject, and some articles

5. Gillis 1996, 2012, 2013.

6. Gillis forthcoming.

7. Gillis 2013, no. 11, 12.

8. Gillis 2013, n. 12; forthcoming, n. 6.

concerning color in antiquity, however.[9] One area of contention is 'color terms'.[10] In this present study these 'color terms' were adapted, broadened or grouped together to accommodate the archaeological realities of the LBA grave material.

How do we define 'color'? One approach in understanding and working with 'color' is the work done by John Gage, former Head of the Art History Department at Cambridge University.[11] He describes 'color' as having three major components or aspects: <u>hue:</u> what is commonly called 'color', such as red or blue or gray, with subdivisions (crimson, navy, charcoal) called tints or shades -- variations of a hue; <u>value:</u> the brightness/shininess or dullness of a color; and <u>saturation:</u> the intensity, strength, *chroma* – the degree of strength, such as the range from pale pink through red to deep crimson, with pink being the least saturated and crimson, the most. In fact, these concepts are nothing new -- they were known and used even by the ancients in historical times, rather than terms for hues.[12] This differentiated understanding of color is more flexible and allows a more nuanced categorization. It was seen in my previous studies that the aspect of saturation, or intensity, of hue in the analyses was difficult to measure but above all indeterminate, and thus did not seem applicable in the BA context: it was therefore left out in the current study (see discussion below). In the following, 'color' as consisting of components of hue and value ('value' here in the Gagean sense, being the degree or lack of shininess, not to be confused with any considerations of socio-economic worth) will be the model used.

A very different approach to color is that of Gibson, who believes that our perception of the world and our relation to it cannot be quantified or measured and should not be viewed 'scientifically'.[13] Instead, he applies an in his terms 'ecological' or environmental approach to visual perception, in which everything is fluid and depends on the moment and means of perception, not on universal rules. He speaks also of the properties of color, hue, brightness or the opposite, and saturation. However, the colors are perceived through the reflectance[14] of light on the 'terrestrial environment, consisting of surface, substance and medium', and understood through several modes: opacity or translucence, type of surface (smooth, matte, etc.), degree of luminosity, homogeneous or conglomerate

9. For conferences and volumes, Gillis 2013 with n. 1-11 and a condensed version in Gillis 2012, n. 5; for articles on color in various materials and contexts, Gillis forthcoming, n. 10-17.
10. For a discussion of color terms, see, e.g., Berlin and Kay 1969; Gillis 2013:63-64; Gillis forthcoming, n. 6, 9.
11. Gage 1993, 1999a, 1999b.
12. Pollitt 2000.
13. Gibson 1985 (1979), 30-32, 52-53, 97-100.
14. His term: the active emanation of light, rather than merely the reflecting of it.

hues, surface softness-hardness, and reflectance, to name some. This approach is generally more difficult to apply to ancient objects in graves (indeed, ancient objects in general); however, there is some relevance to be found here as well, something which will be taken up below in the final analysis.

One area in the study of 'color' that has not been investigated in depth regarding the objects placed in graves is the question of whether their hues and shine value in general or in specific have any particular importance, symbolically or in any other way? Were some of these objects and gifts placed there primarily because of a specific hue and shine rather than for other reasons or was the selection of gifts and their materials meant only to show socio-economic power, wealth and position?

The study[15]

The wish to answer these questions about any possible role of colors of objects in the graves led to studies of all the (non-architectural, non-osteological, and non-tin-treated pottery) finds from all the available graves for three LBA burial sites in the Argolid: Asine, Berbati and Dendra, as mentioned above. The detailed results of this enlarged study will appear soon.[16]

At Asine,[17] eight (of 26) Bronze Age Mycenaean chamber tombs from two Mycenaean necropoleis were found and excavated on the Barbouna Hill by the Swedish team led by O. Frödin and A.W.Persson in the 1920's and 1930. Three (I:3, I:4 and II:1) of these eight chamber tombs from these Mycenaean necropoleis were more or less empty of finds, while the contents from the other five are exceedingly rich, much more so than seems justified by the surrounding settlement areas found and excavated so far. Judging by the pottery, these five (probably family) tombs were in use from LHIIB/IIIA through to LHIIIC late, a span of 250-300 years.[18] The remaining tombs were excavated in the 70's by a Greek team but remain unpublished, as do finds from a third (probably later) necropolis beyond necropolis II. This means that the Asine material in the first two studies, as noted above, was limited to a small number of graves on one site: regardless of the results, they were based on a very little sample from a single site.

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15. As much of the material about the background, analyses and results has been published or is soon to be (Gillis 2012, 2013, forthcoming), I will give only an abridged version here, with references.
16. Gillis forthcoming.
17. Asine - Frödin and Persson 1938; Hägg, eds., 1996.
18. E.g., Mountjoy 1996; for discussion of the possibility of family or group tombs, van Wijngaarden 2012, 64, 68.

The published Mycenaean chamber tombs excavated at <u>Berbati</u> included nos. 1, 2, 3, 8, 10, 11 and 12 in the so-called Western Necropolis,[19] a tholos tomb[20] and an isolated chamber tomb.[21] Unfortunately even though Persson excavated the whole area of Berbati in the mid-1930's, nothing was published until long after. The vicissitudes of time, WWII, and the collapse of the storeroom shelves *i.a.* have resulted in the loss of a lot of the finds, as both E. Holmberg and B. Santillo Frizell noted in their publications; the paucity of finds in these latter, isolated tombs could also indicate that these graves were plundered.

Dendra was published in two major volumes by Persson,[22] including the Mycenaean ChTs 6, 7, 8, 9, 10, and 11 in 1931, and the so-called Royal Tomb plus ChTs 1-3 in 1942, while P. Åström[23] excavated and subsequently published ChT 12, the so-called Cuirass Tomb, plus ChTs 13 and 14.[24] ChTs 4 and 5 were excavated by a Greek archaeologist in the 1920's and remain to my knowledge unpublished.[25]

The finds from all the tombs in the study were registered by material, number of objects in each category (following the MNI method) and hue (simplified down to ten categories) as well as value, being shiny/reflective or matte. The sample in Fig. 2 is an excerpt from a registration form used for the five chamber tombs from Asine. By color-coding the entries I could also register value (=shiny or matte) in the same tables.[26] After some additions and subtractions, I resolved on 10 hue group to be used here (rather than the eleven general hue groupings

19. Berbati - Säflund 1965.

20. Berbati - Santillo Frizell 1984.

21. Berbati - Holmberg 1983.

22. Dendra – Persson 1931; 1942.

23. Dendra – Åström 1977; 1983.

24. In the early 1960's, three ChTs, 12, 13 and 14, were excavated by Åstrom (Dendra - Åström 1977). All three had been plundered. The famous cuirass grave (ChT 12) had also been robbed but the actual cuirass burial with a cuirass, greaves, weapons, etc., and a boar's tooth helmet was evidently missed by the plunderers. In addition, apart from pottery and all the various components of the bronze armor, 70 boars' teeth from one helmet, three silver objects and some few loose pieces of ivory were found. In ChT 13 apart from the pottery, 14 steatite spindle whorls of various colors and 2 bronze items were recovered. ChT 14 contained only one find besides the pottery, a steatite spindle whorl. Thus as with the three fairly empty ChTs from Asine, the finds from these three were not included in the analyses.

25. Åström 1977, 4; 1983, 6.

26. See Gillis 2013, tables 2-5.

				wh/s	y/g	grn	blu	gry	o-r-rbr	r/p	br	bl/dark	variegated
I:1	pottery	75+5 (ca50)											
		tin	anal-10 tin, 16 prob	28									
			2 decor tin										
	metal	gold	gold+bron ring		10								
			gold, bron, silv ring										
			29+ gold obj										
		silver	1 vase	1									
		bronze	no mention in As I		7								
			many obj, incl 5 vessels										
		iron	?					(x)					
		lead	rivet, ?pin					2					
	stone	agate(onyx)	one ?burnt					1				1	x
		agate									1		
		carnelian	3, one red, two r/p						1	2			
		steatite	32+ conoli various hues								1	31+	
		amber	18 beads						13			5	
			pendents										
	ivory/bone		various, frgm, obj	7									
	vitr. mat-fai		7 badly weathered										
I:2	pottery	53 (ca 50)											
		tin	2 tinned	2									
	metal	gold	21 rosettes, 22 spirals		10								
			19 beads, 9 filig, etc										
		bronze	mirror, arrowheads		30								
	stone	porphyry	bowl-egypt										
		lapis laced	lamp										
		alabaster	frgs 3 bowls	3									
		steatite	"										x
		steatite	1 button										x
		agate	1 bead										
		amber	2 beads						2				
		rock crystal	9, flower, with ivory	1									
	ivory/bone/ tusk		unique obj, many bits	8									
	Vitr.matglass		rosettes, lg beads,etc				6+						
I:5	pottery	17											
			?tinned										
	metal	gold	many bits and pieces		5+								
			3 necklaces in vessel										
			one necklace gold +										
			glass alt										

Fig. 2: *A sample of the registration format with the hues on the horizontal axis and the material types on the vertical one*

used by Berlin and Kay for example or computerized color identification).[27] The materials they are found on are as follows:

Hue	Material
White/light	tin foil, rock crystal, silver, ivory, bone, tusk, alabaster (7)
Yellow/gold	oxidized tin foil, gold, bronze, yellow flint, some agate (5)
Green	glass, green steatite, jadeite, lapis lacedaemonian/ (Gillis 2012, note 36) (4)
Gray/ gray-blue, gray-green	lead, iron, flint, stone (4)
Violet	vitreous material, amethyst (2)
Turquoise	vitreous material (1)
Blue	vitreous material, lapis lazuli (2)
Orange/red/red-brown	amber, (carnelian), vitreous material, copper, red steatite(4)
Red-purple, purple	porphyry, amethyst, carnelian (3)
Black/dark	obsidian, steatite, pebble, painted faience, painted terracotta, vitreous material, burnt agate, burnt amber, other stone (8)

After evaluating the results of the first studies (Asine) and the material from the other two sites, certain changes and generalizations were made: in the present study, all glass, faience, and 'glass paste' are included in a category entitled 'vitreous materials'. The hue of all glass that can no longer be determined ocularly or was not mentioned in publications is considered as cobalt -- the by far most common hue for the Aegean -- and the value as 'shiny'.[28] This includes all such material that has vitrified and has no visible hue today. Further, all ivory and bone objects were considered polished and reflective (as opposed to matte) unless

27. Using color charts like Munsell or Macbeth would be counterproductive, in my opinion. They narrow down a hue to its smallest denominator, whereas I wish to see groups, not individuals. In my opinion, hues were more dependent on general categories (blue, red) and the realities of supply and trade than possibilities of choice. Although this classification/division may seem arbitrary, I believe that it reflects the archaeological realities better. Even the separation into 'blue' and 'turquoise' is not as arbitrary as it could seem as the one (cobalt blue) is quite common and the other (turquoise), rather rare. The 10 divisions are more dependent on the reality of the materials available than on ideal hues in an ideal world.
28. 'Shiny' is opposed to 'matte', though it was sometimes more luminous than directly reflective. The great predominance of shiny cobalt was indicated by Prof . G. Nightingale, Prof. R. Brill, and Dr. A. Shortland, in independent pers. comms. My thanks to them. See also Nightingale 2006, 43; 2008, 67; Gillis 2012, n. 23-26; forthcoming, n. 17-19.

otherwise stated in the publications;[29] all amber was registered as orange-red-red/brown and shiny and all steatite was considered dark/black and shiny, unless otherwise noted. These choices may seem arbitrary, but in my opinion it was the best approach for the material at hand.

There were also many stones which were variegated and thus could not be registered under one or another hue category; further, steatite and quartz can come in many hues and were not registered for hue if I did not observe them personally or if the hue was not noted in the publication. They were registered for 'value', however, whenever possible. Further, many stone types do not have to be polished although they usually are: unless these stones were seen personally by me and could thus be registered, they were excluded from the value analysis.

As mentioned above, the aspect of saturation was perhaps of lesser importance. In the results of the first two studies, those of the Asine material, saturation did not seem to follow any pattern or have any significance. This became even clearer when looking at the analyses for saturation from all three sites. Further, the assessment of saturation had been arbitrarily decided by me in the earlier studies: white, silver, beige, etc., were obliviously low saturation as the black/dark hues were clearly high saturation, but the determination of degree of intensity (between high and low vis-à-vis medium, for example, or whether a bright blue was as saturated as a deep red, and whether these should be medium or high saturation, to give another example) was much more difficult. The possibility of calculating the saturations digitally through my photos was rejected due to potential differences in photo quality vs. visual observation, as well as (as for the case of hue) because of the probability that the objects were chosen on grounds of what was available, although there is no way to know this for a fact. Thus, noting the difficulties and inconclusive results for saturation in the first two studies and the difficulty for anyone else to replicate the method, I decided to exclude saturation entirely from the analyses.[30]

The question of whether or not to include the non-tinned pottery was a difficult one as well. In the first study I registered all pottery as red/red-brown and as matte.[31] This meant that statistically this category was one of the largest ones. This seemed misleading, however, for several reasons: 1) much of the pottery has a slip that is more brownish, or buff than red/red-brown. Is this white/light, yellow, brown? 2) Most of the grave pottery is decorated: thus, a vase could have at least two hues – which hue should these be registered as? For example: due to the reduction and reoxidation firing processes and the thickness of the 'paint',

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29. Personal observation and Prof. O. Krzyszkowska, pers. comm.
30. For more on this, Gillis 2012, n. 37.
31. Gillis 2013, n. 34, where I discuss these problems.

the same decorated band on a vase could range in hue from red through brown to black. Adding the base tone of the slip to this would make four or more hues, creating a situation similar to the variegated stones – multi-hued and impossible to assign as a single hue; 3) the question of alternatives is often absent in pottery. Pottery was a necessity, not a choice, for containing liquids and for possible ritual feasting in combination with the burial. Further, there is no alternative to clay hues, except for kaolin clays (white, iron-free), which are not common; 4) the surface of the pottery could be in part matte, in part semi-shiny, especially the 'painted' parts, depending on the finishing process. Thus, due to all the problems mentioned, all non-tinned pottery will continue to be absent from the study.

On the other hand, a good bit of the pottery was tin-covered. This ceramic surface treatment is found in grave contexts only, and must be considered a deliberate choice exclusively for burials - definitely not made for reasons of functionality but rather a conscious alteration and should therefore be registered. Further, analysis of a number of random tin-covered sherds indicated that roughly 50% of these 42 sherds from a number of graves and sites had been oxidized to a shiny yellow/gold hue, while *c.* 50% retained their original shiny white/silver hue.[32] Following this division, all the registered tin-coated vessels were dividing equally between white/silver and yellow/gold.

The analysis results
Hue
Using MSExcel to process the information in the database and to represent the results in the form of bar graphs gave the following results: for hue, looking first at Asine for ChTs 1,2, 5-7 (Fig. 3a), the dominant hue is clearly yellow/gold (due in part to the number of tin-covered clay vessels – see above), followed by black/dark and only somewhat less, by white/light (also due in part to the large number of tinned vessels, of which 50% are registered as white/light and 50% as yellow/gold). These three hues are found in all the graves. Four other hues (gray, violet and dark red/red-purple) are represented minimally and two others (green and turquoise), not at all.

Looking at the results from Dendra (Fig. 3b), we see that yellow/gold is predominant by far, followed by black/dark and in third place, by white/light for the chamber tombs, blue for the Royal Tomb. Of the other hues, both the Royal Tomb and the combined chamber tombs have five of the seven remaining hues: however, only three coincide, gray plus blue and dark red/red-purple in inverse relative

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32. Gillis *et al*. 1995.

percentages. The relation of yellow/gold–black/dark-- white/light is more or less the same for the two (Royal Tomb and all ChTs) and even as compared with Asine.

As for Berbati, as seen in Fig. 3c, the first thing that strikes one is the high percentage of black/dark hues. Black/dark is predominant here, comprising roughly 30% of the total, due primarily to the relatively large amount of dark, conical steatite spindle whorls/conuli: one or more shiny, black or dark steatite conical spindle whorls were found in quite many of the registered tombs, including the tholos tomb. Excluding untinned pottery, skeletal material, and unregistrable objects, the seven Berbati ChTs had only 73 objects registered in total by hue (i.e., 'Holmberg's' ChT had just 33 items total and the tholos tomb, a mere 21 objects -- these two graves were probably plundered, although this is not mentioned in the publications): compare this to the five Asine ChTs that together had over 400 objects. The high percentage of objects with a yellow/gold hue in Holmberg's ChT is due largely to the proportionately large number of tinned vessels.[33] On the other hand, the ChTs had 8 of 10 hues, and although often represented by only one or a handful of items, all the possible hues are represented here among the three locations with the exception of green. Of note is also that the Berbati ChTs have on average 10 objects in each, while the Dendra ones had 20+ and the Asine tombs, an amazing 70+ items in each, excluding pottery in all cases except for the tin-covered vessels.

Looking at the comparison of locations by hue and percent (Fig. 3d), we get a clearer picture of both the similarities and the differences between sites and between locations within the sites. Generally speaking, both of the Dendra contexts and the ChTs from Asine resemble each other; as seen above, Berbati on the other hand shows differences both intra- and intersite: the predominance of black/dark at Berbati, for example, is greatly at variance with the other two sites, as is the relatively large amount of (greenish, bluish) gray. The two different locations at Dendra, one a collection of ChTs, the other an amazingly rich tholos tomb considered by the excavator as the final resting place for three members of an elite and/or ruling family, are still similar to each other regarding choice and relative amounts of hue. If we look at the large aggregate of chamber tombs from the three sites, leaving out the Royal Tomb, Holmberg's Chamber Tomb and the Berbati tholos tomb, there is a degree of similarity, but regarding the proportions of the most represented hues, yellow – black – white it is clear that even here there are fairly large differences, especially between Berbati (with its great proportion of black/dark and inversely small percentage of yellow/gold) and the other two sites, whose predominant hue is yellow/gold. The relatively large amount of gray in the Dendra tombs and even the Berbati ones in proportion to the other 'lesser' hues' is also of interest: at Berbati
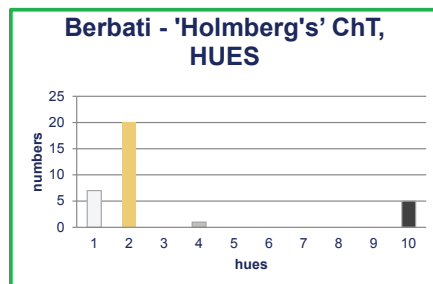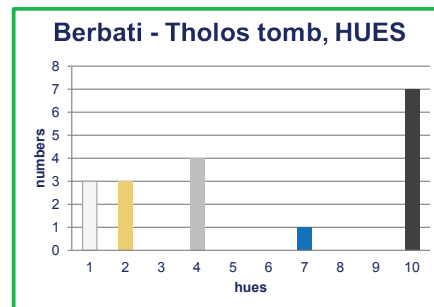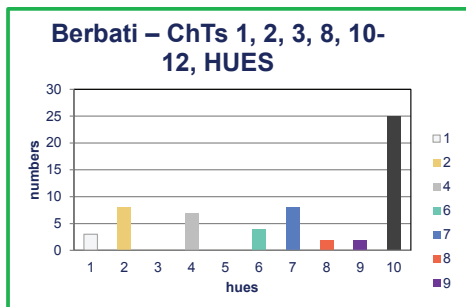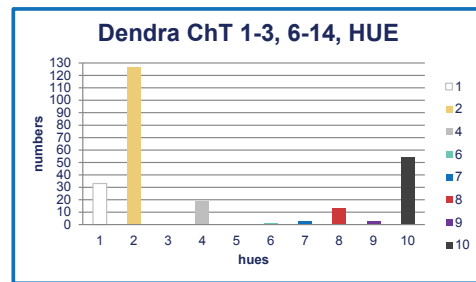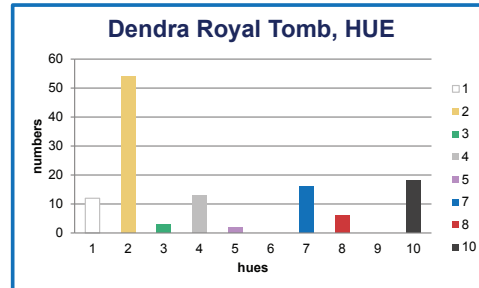
33. Berbati – Holmberg 1983, 49.
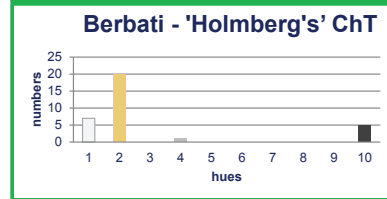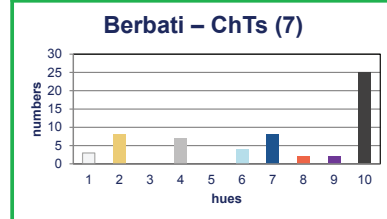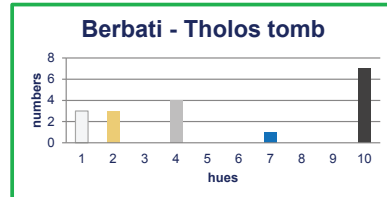
DISTRIBUTION OF HUES
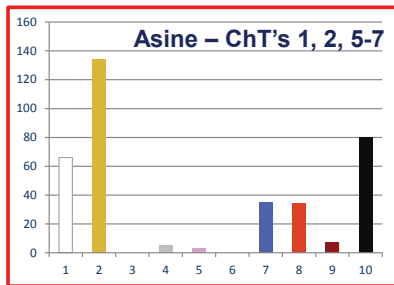
3a Asine

3b Dendra

3c Berbati

Fig. 3: *Bar graphs showing the distribution of hues: 3a for Asine, 3b for Dendra (two burial areas), 3c for Berbati (three burial areas), 3d showing all sites/areas in the same figure, and 3e showing the distribution by site and finally, all together.*

Asine ChTs (5)
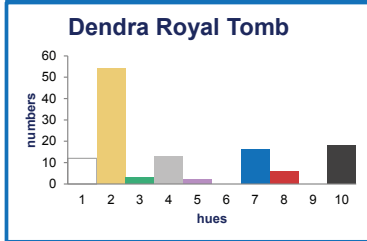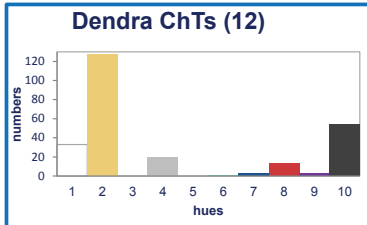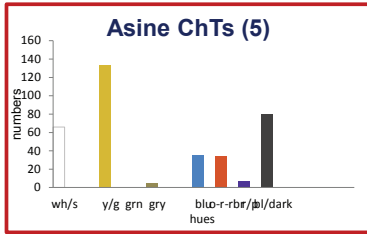
1=wh
2=y/g
3=grn
4=gry
5=viol
6=tu
7=bl
8=r/r-b
9=pur
10=blk

A=364
DChT=253
DRT=124
BChT=73
BH's=33
BTh=18

Dendra ChTs (12)

Dendra Royal Tomb

Berbati - Tholos tomb

Berbati – ChTs (7)

Berbati - 'Holmberg's' ChT

3d Distribution of HUES

Asine - all

Dendra - all

Berbati - all

ALL
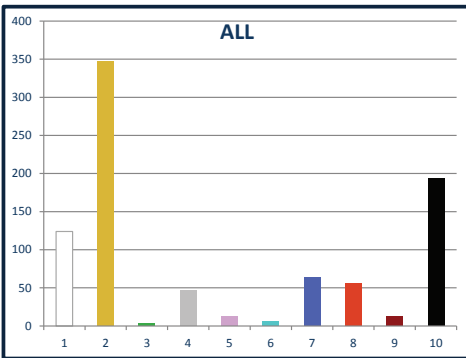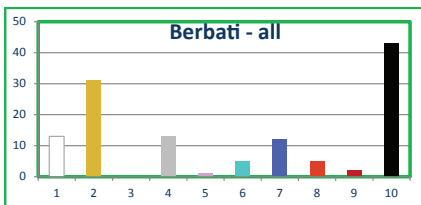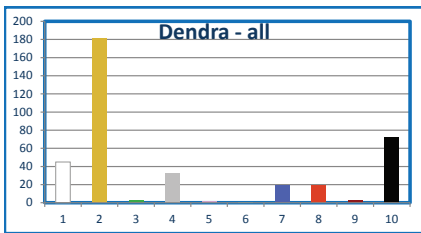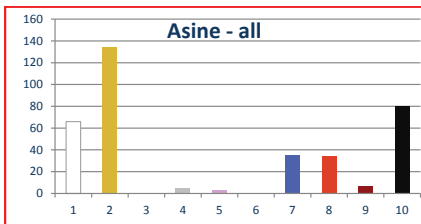
3e Hue distribution per site and all together

this is due to a mixture of materials—lead, flint, and a large whetstone, while at Dendra, several of the tombs had bluish- or greenish- or light gray, shanked, matte spindle whorls. A composite view of the hue distribution is seen in Fig. 3e, which shows the distribution by site and the total for the three sites all together.

Thus, although we saw above that there were variations from site to site, and even within sites, it seems evident as well that yellow/gold is by far the most dominant hue: of a total of 868 registered, 347 or *c.* 40% were yellow/gold, followed by black/dark (22.5% or 195) and white/light (124 or 14%) (Fig. 6). The inclusion of deliberately burnt (blackened) pieces of agate and amber reinforces the possible importance of black/dark. The other categorized hues are all represented in modest proportions. The occurrence of commonplace objects like black steatite spindle whorls and local, low- or non-status objects such as flint, whetstones, pebbles, and matte, grayish clay spindle whorls in high-status graves could have been placed there for their hues. Even leaving leeway for missing items, subjective calls or arbitrary judgments, the results of the analyses would seem to indicate that aspects of shine and certain hues had significance in burials and beliefs.

Value
Regarding value, shininess or matte-ness, almost every find was shiny, or at least reflective, glowing (Fig. 4). This is most evident at Asine, where 397 objects of 405 registered for value were shiny, reflective, polished, or glowing, as opposed to 8 dull objects – flint, (deliberately) burnt agate and burnt amber, lead, animal bones.[34] Shiny, reflective objects must have been extremely important. At Dendra, of 408 total registered values, 391 had high or medium value, while only 17 were matte. The proportions of shiny:matte, *c.* 23-25:1, were only slightly lower than at Asine (*c.* 25:1). At Berbati, 'Holmberg's' ChT has *c.* 32:1 (in part because of the high number of tin-covered vessels), the ChTs have *c.*8.5:1, and the Tholos Tomb has a much lower percentage, 3:1.

Despite whether viewed individually by locus, by settlement or all three sites together (Fig. 5), there can be no question that the shiny, bright or light-reflective value component, i.e., high or positive value, would seem to be far more important than the other, low-value, matte end. Of the 889 objects in total registered for 'value', only 40 – or around 4% - were not shiny or reflective. One could ask what alternatives there were. This is a more difficult question, but some alternatives did

34. The differences in the number of objects registered by hue in relation to value is due to the fact as discussed above that various factors made the registration of the one or the other aspect difficult: variegation or type-variety in hue, or missing items which could have been either shiny or matte.
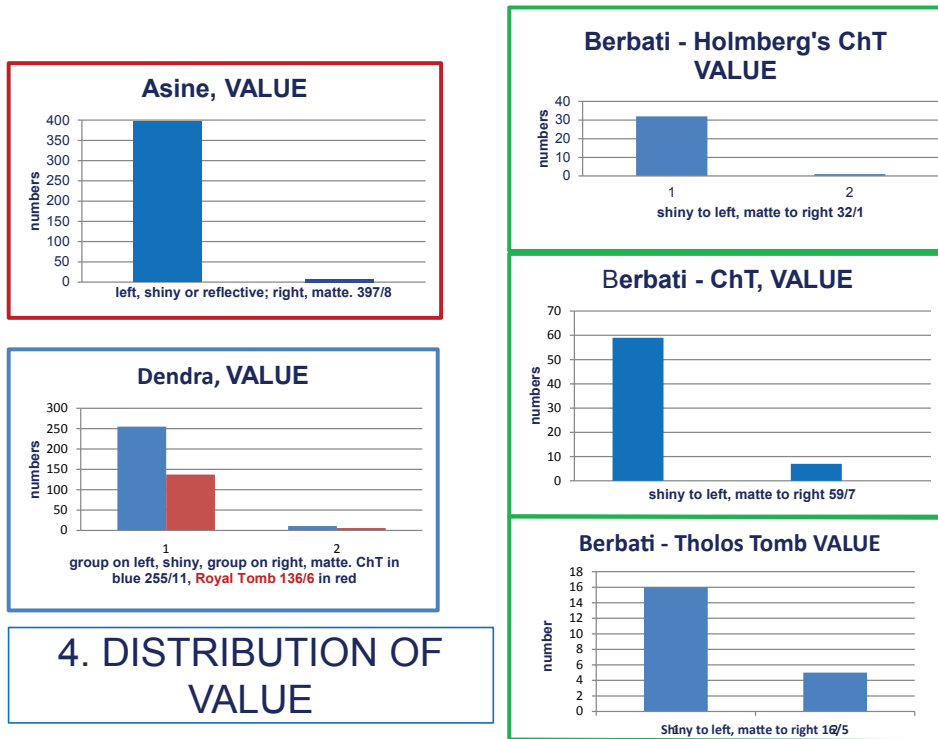
Fig. 4: *Bar graphs showing the distribution of value (shine) for the sites/areas.*

exist: for example, unpolished horn or bone could have been used. Steatite spindle whorls did not have to be polished. Special burial ceramics or more decorated (or plainware) vessels, untinned, could have served the same purpose. In fact, tin covering of ceramics found only in burial contexts, as stated previously, must have served a special purpose, and shine comes instantly to mind. One must conclude that high value seems to be an extremely important factor in burials and beliefs.

Thus, looking (Fig. 5) at the two analyzed components, hue and value, it appears clear that apart from any socio-economic aspects, there were certain general elements important in these burials: the aspect of value (shininess, reflectivity, glow) seems to be of prime importance, to the extent that normal (even monochromed and decorated) pottery, normally matte or sometimes partly shiny, was covered with glued-on, thin strips of shiny tin foil. Certain hues were predominant, while the majority, although present, were notable by their low numbers. Even leaving leeway for missing items, subjective calls or arbitrary judgments, the results of the analyses show without doubt that aspects of shine and certain hues had significance in these burials and beliefs.
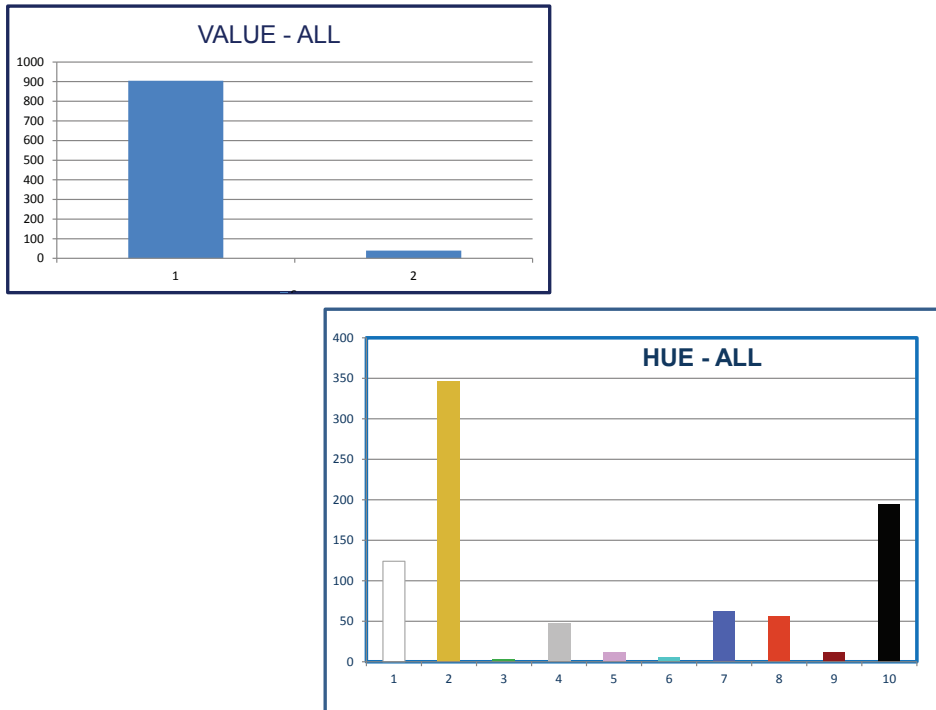
Fig. 5: *Total distribution for value (shine) and for hue.*

Symbolism, materiality and color

It seems fairly clear that there was symbolic value behind the gifts chosen.[35] For symbols to express something, to mean something other than the face value of the object, a tacit and explicit understanding of the symbol and its meaning needs to exist: thus most symbols are culturally determined.[36] Even the briefest look through some of the literature on symbolism reveals, not surprisingly, many

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35. Let me give a simple definition of my use of the word here: a symbol is something (an object, a word, a drawing, an action, etc.) that represents or stands for something else, especially a material object representing something abstract. As an example, a red rose is a flower but is also a symbol for love in certain cultures and times; a round, red light at an intersection means 'stop'; a dolphin on a coin in ancient Greece was symbolic for the island of Delphi.

36. 'Human cultures use symbols as a means to express their specific ideology, social structures, and to represent characteristics of their specific culture. Thus, symbols carry different meaning depending upon one's cultural background. The meaning of a symbol is not inherent in the symbol itself, but is culturally learned.' (thefreedictionary.com, citing Womack, M. 2005. Accessed spring 2014. *Symbols and Meaning: A Concise Introduction.* California. '… its explicit forms [of symbolism] are unintelligible by themselves and their study has always presupposed the existence of an underlying tacit knowledge.' Sperber 1974 (English version 1975), *Rethinking Symbolism,* Cambridge, xi.

different approaches, understandings and applications. Robb has discussed, surveyed and critiqued the various theories and collected them into three prevalent (and opposing) directions.[37] In the following analysis one of these directions is applicable and will be used: the 'token' view, the meeting of idea and material, of transmitter and receiver, and the interaction between them in an established social context, whether it be personal, local, regional or global.

Looking at the tombs studied here, we can see many different levels of explicit symbolism at work: the grave architecture in itself is a statement of knowledge, power and status. Going on to the gifts, one natural question is what motivated the choice. Perhaps much was prescribed, but it appears that families could freely choose some of its their grave gifts (judging at least by the differences in the goods from family tomb to family tomb at Asine[38] and the differences in grave gifts between sites like Berbati and Asine for chamber tombs. above. Assumedly religious rites and paraphernalia were important and standardized, although I have no concrete proof for this or for evidence of it in the grave gifts: it can perhaps be assumed that certain specific actions, objects and acts were necessary ingredients in religious expression. Another clear motivation must have been socio-economic: the family's desire to demonstrate its actual or aspired wealth, status and power. This was done in many well-known ways: the large amounts of goods - rare stones, metals, imported luxury goods and rare materials; the materials themselves (here would be for example metals, especially gold, probably fine-woven textiles, imported spices, and so on; the workmanship and technologies (e.g., making tin sheeting and applying it to pottery); the ratio of luxury items (as opposed to practical ones, such as spindle whorls and whetstones); the family's means of obtaining goods from afar through their knowledge of distant societies, technologies and products.[39]

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37. Robb 1998. He divides the current theories on symbolism and their opponents into three large groups, which he calls symbolism, as 'tokens': message-bearers, transmitter of information, material signifiers (often socio- political messages); as 'girders': the supports creating and structuring the mental and social world, thought processes, ideal meanings; and as 'tesserae': a shifting momentary interaction between idea and material, completely arbitrary in the way they are put together.

38. Gillis 2013, 83-85.

39. See, for example, Mary Helms' classic work (1988), where she says on p. 4, 'Not only exotic materials but also intangible knowledge of distant realms and regions can be politically valuable "goods".… .' both for those traveling, and those at home '…who are able to acquire such knowledge [and of course the goods] by indirect means and use it for political advantage.' A rare metal such as tin is one of these goods. Broodbank (1993, 324) in talking about the Early Cycladic relation to imported metal says that its value '…lay not just in its properties but also in its exotic and invisible origins; … .' To this, I would like to add technological knowledge, or rather, the access to those possessing such knowledge, who for example could produce tin sheeting like the tin foil for the tin-covered vessels, ranking among the difficult and rare technologies.

The funerary display allowed them to maintain their place in the ranks of the upper echelons of the society through this display. Thus the tomb itself and its contents (via amounts, materials, manufacture, import, social factors and so on) are clear symbols of power and prestige, created, read and understood by all.

Symbolism in color

Looking above at all the socio-economic symbols, we realize that there is one aspect of the gifts having potential symbolism that is seldom mentioned – color: hue and shine. The first question is whether there was intentionality in their choice; secondly, were the colors symbolic, and thirdly, was any symbolism explicit, i.e., conforming to certain cultural interpretations and connections. Regarding the first question, there can be little doubt of intentionality here: deliberate, conscious choice indicating intent, idea or purpose. Shine and certain hues in particular had significance – or at least great precedence - in burial rituals and beliefs, as seen in the results above, prescribed or representing personal preference. Regarding the second and third questions - were they symbolic, and if so, can we say anything about what they symbolized – are much more difficult to determine without written sources to help us.[40]

   A quick definition of color symbolism is that a hue or even shine, with its various properties, is message bearing and transmits messages or emotions be they explicit or subconscious, evoking a particular response, understanding or feeling in the viewer. There is often clear intent and no ambiguity: if such symbolism exists, the transmitter (in this study, the Perssons selecting the grave goods or the objects themselves) sends a message through hue and value and the receiver(s) (the viewer of these color aspects) is clear about and shares the meaning of these direct and unequivocal symbols.[41] An example – a bright, canary yellow is usually thought of as cheerful. Some hues are considered 'warm', others, 'cold'. It is no coincidence that bedrooms and classrooms for children now-a-days are often painted in soft, warm, light, pastel hues. These symbols are intentional, deliberate and explicit in the society in which they are used, and the same message is (usually) received as was sent. If we are not a part of this society, we do not necessarily understand either the symbols or the meaning.

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40. An understanding of these pan-societal messages can be gained through written sources and critical examination of the evidence ('exegeses', to use Turner's (1967, 50-52) term for understanding the meanings of symbols.

41. Example: red roses meaning 'I love you', pink or blue for newborns to identify boy or girl, black in the Western world and white in the East today for mourning. Shiny hair is good, dull hair, less so, the shiny halo around Jesus, the saints and other holy persons

Did this 'intentional' color system exist in the Aegean Late Bronze Age? Possibly, but we do not have the literature to support this.[42] But if we do not have information -- first-hand communication -- but only the objects with their colors? Can we then extrapolate or make analogies with those contemporary or comparable societies that did have color symbolism[43] as to the meaning of these symbols in the LBA? This is doubtful. The message transmitter exists but the receiver is down. The message can have clear intent, or be more personal for the transmitter/user, as in expressionist art where it is not always clear what meaning the hues had for the artist (e.g., purple sky, green skin – assuming they had meaning for his/her).

The answers to the second and third questions above must be that at least some of the hues and especially the shine seem to have been special (the extreme emphasis on shine and on yellow, black and white) in the funerary setting, but there is no way to determine today what they may have meant 3000-odd years ago to the LBA Mycenaeans.

Another kind of meaning through color could be called something like 'unintended symbolism', where the message transmitted is not deliberate or even conscious, and the receiver may not be actively aware of having gotten it, but still reacts It is in this sphere that materiality and agency come in, where a even non-sentient being or object can send out a message. This will be taken up more fully below.

Materiality, agency and affordances
Materiality theory is based on the idea that the material culture takes an active place in the world, with 'active' the key word.[44] There is great complexity and

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42. In Linear B, there are very few hue terms (e.g., Gillis 2004; Gillis 2013, n. 11; *contra* Blakolmer, e.g., 2004: 63 and table 1, who finds 39) and no use more than as adjectival descriptions is recorded.

43. Pharaonic Egypt, known through texts (e.g., Baines 1985; for more references, see Gillis1999, 289-90, and n. 5; 2004, n. 4, and n. 5 for Anatolia). In the New World, documented by Spanish colonists and monks in the 16th *c.* AD: Mexico (e.g., Hosler 1994), Central Andes (e.g., Lechtman 1988) and Peru (e.g., Shimada 1997) – for references for them, see Gillis 1999:294-297 and n. 24-37; 2004, 56-57 and n. 3.

44. For a deeper understanding of materiality and agency for objects, see, e.g., two volumes devoted to materiality, DeMarrais , eds., 2004 and Maran, eds., 2012; plus many articles, for example, Bird-Davis 1999, especially 69-71, Renfrew 2004, 23; Gosden 2004, 33; Herva 2006a and b; Johannsen 2012; Hahn 2012; to name a few. Bouvin 2004, 64 sums it up well, 'We need to return to the material world. …[a] holistic approach that recognizes that material culture is not a product of human history, but an integral part of the human story.'

diversity in the various uses and interpretations of materiality. In the following I will not espouse the one or the other theory or interpretation, but will try to implement materiality and agency in aspects of color, including both human and material agents in a two-way discourse in an attempt to understand the 'unintended symbolism' mentioned above.

The theory of materiality grew as a reaction to the belief in rationality and the thinking man as the ruler of his world, with a basic preference for mind over matter, subject over object, rationality over emotion, culture over nature and male over female.[45] This belief that the human is rational and logical and everything can be explained through rationality is rejected by most scholars today both for its clear bias and for its completely anthropocentric nature: a more encompassing theory is the concept of materiality.[46] The understanding that material culture has its own 'life' can range from a belief in total animism[47] to a world where non-human objects lack cognition and intentionality, but can 'communicate' as agents. In this idea of the world, everything is intermingling, flowing in and out, in flux, creating new actions and reactions in the dynamics of relationality, the entanglement of material, agents and senses.[48]

If we can accept that the world is fluid, not fixed, a kind of constantly changing meshwork, then we can also accept that all the participants in it - not only people but even objects - can interact and cause things to happen – '…objects by their very nature of connection with humans quickly shift from being mediators to being intermediates.'[49] These 'intermediaries' are usually called *agents*, or in Latour's term, actors.[50] Agents can be primary or secondary. These agents are, quite simply, someone/thing that leads to or causes someone/thing to happen/change/react: they have *agency*.

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45. Although this thinking was '...intellectually rooted in classical antiquity and Christianity,' Kopytoff 1986, 84.

46. See, for example, Malafouris 2004:53, who makes, 'The general call for non-dichotomous thinking in archaeology… .'

47. The belief that humans are just one part of the greater realm of existence with everything having a life force For example, Ingold 2006: in animism '… beings (of all types, human and non-human) are constantly being generated, a world of becoming rather than being,' p.13; Bird-Davis 1999; Harvey 2006, xi-xii, 122-127.

48. Described as a state of constant interaction and constant flux, called different things but meaning the same: meshworks (Ingold 2006); engagement (Renfrew 2004); node, conglomerate (Latour 2005, 44, 65); entanglement (of interactions) (Hodder 2005, Latour 2005, 44). The idea of constant flux and changeability in relationality is seen also in Gibson (1986/1979).

49. Latour 2005, 79.

50. Latour 2005.

Agency implies relationality, intercommunication, the 'meshworks' mentioned above. Agency can be seen as a type of dialogue development (also non-verbal) in which the objects become agents that can trigger or influence our actions[51] or vice-versa. Many scholars dealing with agency differentiate anthropocentrically between human agents and non-human agents often speak of intentionality, while others believe that inanimate objects as well as humans possess agency: '… the proposition that *agency* is not simply a property of humans but equally, or instead, something distributed across humans (and other animate beings) and, crucially, inanimate objects, structures, substances etc. A concept … synonymous with *causation.*'[52] Agency contains at least two fundamental and inseparable phenomena: materiality and social reproduction,[53] or 'being generative', in Maran and Stockhammar's terms:[54] thus, material objects have agency and can cause a reaction.

An example of agent/agency: it's cold here—I will make a fire and get warm. I strike a match ('I' am the agent, the action or agency is the striking of the match). The match ignites the paper and kindling in the fireplace and becomes an agent (a part of the meshwork) - action and reaction, while the fire, the result of this 'double action', reacts by being a fire, which subsequently gives off heat, inducing feelings of warmth, contentment and comfort in me, and is thus also an agent.[55] Another example, Gell's classic case of the Trobriand Islanders and their canoes, illustrates this well—the sight of the terrifying demons carved on the prow-boards of the war canoes pulling up on the sands of a neighboring island, vessels full of people having access to magic which allowed them to create these boards, and the meaning (and invasion) of these menacing monsters effected a state of total panic in the recipients, the locals, thus making them easy prey. [56] These carvings become actors, agents with agency.

There are extremes in the concept of agency - Gibson has a theory on '*affordances'*, which may be relevant in the analysis of the grave material in the

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51. Maran and Stockhammar 2012.

52. Johannsen 2012, 316.

53. Dobres and Robb 2005, 162.

54. Maran and Stockhammar 2012, 2.

55. According to Gosden (2005) objects can affect people (be agents) in four different ways: 1. through form – morphology, decoration, color 2. genealogy, also known as the cultural biography of things 3. source of the object 4. effect, sensory. The fire example above illustrates his fourth way, perhaps the most representative, but his first way is equally relevant to this study.

56. Gell 1992; the theory behind his ideas, Gell 1998.

Aegean LBA below.[57] According to Gibson, an affordance is what something, an object, affords (=gives, provides, allows, causes, creates). In other words, a fire affords heat, light, injury, comfort, pain, burning. The objects afford things regardless of a recipient: the match affords a way to ignite the paper (whether or not there is any paper around), fire affords heat whether or not there is anyone nearby getting warm. The old riddle about whether a tree falling in an empty forest makes any noise is solved. The 'affordances of objects' means that function exists in the object itself, not in our interpretation or evaluation, and that objects can be object agents.

A modified, 'post-Gibsonian' view, and one more relevant here, has been presented by Knappett who modified Gibson by adding the interaction between affordances and cognition – an object can afford things but these affordances are not universal or absolute: understanding is also needed.[58] He calls it situational cognition. An example – a dark, gaping hole affords a place to put things into. However, it is human understanding which connects this whole to a death, a grave and an interment. The human viewer adds his cultural experience and understanding to arrive at burial, sorrow, feasting, loss: thus, the relationality of material and cognition. The black hole affords putting something into it, but the situational cognition – understanding the context - adds thoughts and associations, memories, emotions – it is an active agent, but works together with the humans, who are also active agents: they understand the affordance of the hole/tomb and receiving this action, react/act by putting the deceased and the other objects into the tomb, grieving, and so on. The same object can afford different behaviors at different times and for different receivers: a cup might afford grasping and drinking for a human and possibly an ape, but not for a new-born or a spider. The human might pick up the cup, but the infant could lick it, or kick it over.[59]

Color and materiality
Was there a symbolic meaning in the use of shine and hues in the LBA Argolid burial ritual apart from any socio-economic and political message? As discussed above, in my opinion there can be little doubt that they had importance at the three sites and probably had specific meanings and symbolisms, but we have no way of knowing for certain. Was there materiality and agency, message intercommunication between the human and the material: that is, can we determine

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57. Gibson 1986/1979, mentioned above regarding color definition, and his Ch. 8.
58. Knappett 2004, 45.
59. Withagen and Chemero 2012.

whether the objects through their materiality communicated a meaning of their own apart from or in addition to any meaning intended by persons?

Let us now see whether we can tie together the analyses of hues and values with the ideas of symbolism and of materiality and agency. In the following I shall examine the role hue and shine may have had in burials, seen through a filter of materiality theory, and refrain from suggestions of interpretations and color symbolism, although tempting, in favor of concentrating on what the material evidence says.

Value

The shininess or reflection of the objects and materials seems to have been the most important color aspect of burial gifts, with 96% of all gifts shiny or reflective. Shine is not just a mute attribute of an object but can have agency and affordance as well. The reflectance of a shiny surface (for example, a tinned vase) can light up things and areas around it. It has an affordance, it can give off light. Even in the black of the grave, the affordance of giving off light and sparkle still exists, if one follows Gibson's views (see above) – perhaps shining in the next world and illuminating the way for the deceased. In a (hypothetical, to be sure) funerary procession from the settlement to the semi-dark dromos and finally into the very dark tomb (see below), it is tempting to see material messages communicated to the viewers: the flash and spark of sun striking the golden rosettes of the shroud,[60] the shimmering of light reflecting from polished stone or ivory, the dappling of the firelight in the dromos on the walls, the grave goods and the faces of the people assembled there as the shine of life flickers and gradually fades into the dark of death. The light becomes dulled and dampened through the dimness in the dromos, only to disappear in the dark of the tomb – another, but quite obvious message. This materiality and agency of the objects – their initial shininess, their indistinct and subdued qualities in the dromos and their imminent imperceptibility in the tomb – communicate, enable cognitive associations (Knappett's situational cognition), and heighten the emotions as the burial goes on (various emotions and senses are or can be affected through some aspects of the materiality in the burial ritual).[61] To be sure, temptation is not reality but this material message does seem to be a strong possibility. Indeed, the thought has occurred to me that as the dromos itself can be considered an agent with its interplay of light and dark (as befits a liminal area in a burial ritual) and

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60. For example, Dendra - Persson 1942, pl. XXVII.
61. See for example Malafouris 2012,79; Morris 2004,36; Hurcombe 2007; Gosden 2004, 2005, 202; Robb 2010, 511, Herva 2006a and b.

its narrow shape, its initial architectural conception was created expressly to suit this purpose - a fitting setting for liminality in burial ritual.

Hue

There can be little question that certain hues were important in burial contexts, at least as seen in this study. Despite internal differences between the sites (Figs. 3d, 3e), the hues which predominate are yellow/gold and black/dark. This is seen not only statistically and numerically but even in the larger numbers of different materials used for these three hue categories as compared with the other seven, as seen in the table (see above, indicated by the numbers in parentheses for the categories). Of further interest is that some hues are almost non-existent (see Fig. 6): for example, there are only three green objects, sealstones from the Royal Tomb, out of almost 900.[62] Thus, it would seem that certain hues (regardless of their materials) were included in large numbers, while others are surprising in their almost total exclusion. We must conclude that the choice of hue was intentional and meaningful and the sensory impact of the objects seems to have been an important aspect in the inclusion of the grave goods.

The large proportion of black/dark objects could easily represent the occasion— the blackness of the gaping hole at the end of the dromos, the blackness of the tomb when it is sealed. This could explain why there are so many black objects. The black steatite spindle whorl seems almost ubiquitous in grave contexts.[63] As for the yellow/gold – it obviously has great significance and most probably symbolism, but it is not certain what that significance and symbolism were.

Other hues seem to have had other roles and other associations. Take the example of sealstones. At some point during the burial ceremonies, perhaps during the procession, almost certainly in the dromos, the grave gifts would have been on view. Chapman wrote (in discussing Varna and Durankulak) that the aim of the hues or combinations of them in grave contexts was to facilitate non-verbal [material] communication, about green fields and brown mountains,

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62. Once again we must remember that much of the faience, which comes in all the hues, is little more than grayish crumble today, and much is missing. Green could also have been represented by living flowers and plants, textiles, or other perishables, as even the other hues, of course. While this could lessen the imbalance somewhat, I do not believe it would make a significant difference.

63. Spindle whorls of steatite are also found in settlement contexts, but whorls are also of plain, undecorated clay. This is the case for i.a. Asine, Dendra and Berbati (Eva Andersson, pers. comm.).

Hue		wh/s	y/g	grn	gry	lilac	turq	blue	o-r-rbr	r/p	bl/drk
Berbati											
Chamber tombs		3	8		8	1	4	11	5	2	31
Holmberg's ChT		7	20		1						5
Tholos tomb		3	4		5		1	1			7
Total	127	13	32		14	1	5	12	5	2	43
Dendra											
Chamber tombs		33	127		19		1	3	13	3	54
Royal tomb		12	54	3	13	2		16	6		18
Total	377	45	181	3	32	2	1	19	19	3	72
Asine											
Total	364	66	134		5	3		35	34	7	80
All Hue	868	124	347	3	51	6	6	66	58	12	195
		14%	40%	0.35%	6%	0.7%	0.7%	7.5%	6.7%	1.4%	22.5%

Fig. 6: *Chart showing numeric distribution by hue and site.*

for example.[64] Shapland, in studying sealstones, found that clear/green/blue sealstones have a high percentage of marine animal depictions (81%) and '.. seem to be reinforcing a link with water, while other colors can be associated perhaps with land.'[65] The viewer, seeing these objects, might unconsciously associate the deceased with the land, or with water, through cognitive association. Even if they were put in as grave gifts by a person (acting as an agent), they were agents in their own right, communicating the message of land, sea, ownership, marine life, and so on by their hue.

The motifs carved into the sealstones are usually too small to see except from very close up. These engravings in a much more literal way tell their stories of the brave bulls, wild lions, calm agrimis and marine life that formed a part of the world in which they all lived, reinforcing the background hues of their natural habitats. The choice of gem hue could have been influenced by whether the deceased and his family derived their status and power from land or sea. The choice of motif could strengthen but also qualify this connection: thus, the land-owning deceased could be associated with browns and greens, while the motif could have symbolized his or her position - a ruler, a hunter, a warrior on land in addition to the general expression of wealth and power. The blues and sea greens

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64. Chapman 2002, 67.
65. Shapland 2009, especially 118 and figs. 6 and 7.

would work in the same way, with the motifs acting as qualifiers. In this way, both the hue and the motif (in the same hue) would be agents communicating a message to the recipient: the general hues indicative of the deceased's power base and acting as a sensory, unintended agent, and the motif clarifying it, acting as an explicit, intentional agent. The fact that these carved motifs are often very difficult to see even holding the gemstone close to one's eyes (personal observation) is even more indication of their agency, being message transmitter, with or without a receiver. Even those who did not know the deceased that well could understand the family background and position from the message they received through the (sensory) agency of the hues.

This connection of hue and agency can be suggested in the material studied here. From Asine there were four sealstones, all from ChT I:1; a 'dark agate' (probably brown or grey?)[66] engraved with two bulls; a red carnelian with a calf; a 'grey' stone with two bulls and another 'grey' one with a bull on his hind legs and a man behind him.[67] From the Dendra ChTs there are seven: a large carnelian carved with an antelope and another also of carnelian showing a bull from ChT II and one from ChT III, also of carnelian, with an antelope.[68] Further, from tomb VI a 'brownish agate' with a sheep or goat.[69] From ChT VIII a orange-brown agate, with a bull and an attacking lion (p. 48), and two from tomb X - a 'mottled agate', three-sided prism seal with two agrimis and a lion on one face and a lion and an agrimi on the second face,[70] and for the second , a 'light agate' probably recarved with a boar seemingly overlying an earlier bull figure plus a lion.[71] From the Royal Tomb, there were eight in all: six in a cup by the 'king': a 'dark agate' with lion and bull plus agrimi; two of 'light agate' with a lion and a bull; three of jadeite,[72] showing two goats, a goat with background vegetation including a palm tree, and a lion, respectively.[73] The 'queen' had one stone on her wrist, a red

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66. As seen in CAMEO 2013, http://cameo.mfa.org/wiki/Agate last accessed spring 2013, agate comes in a wide variety of hues and is always banded. I believe that if these agates had been red or blue or green, they would have noted this. I am guessing that these hues are fairly neutral—light neutral or dark neutral.

67. Asine – Frödin and Persson, 1939, 373-4, fig. 242.

68. Dendra – Persson 1931, 80, 90,106 (52), pl. XXXIX: 4 left, for the antelope.

69. Dendra -- Persson 1942, 27(18), fig. 31.

70. Dendra -- Persson 1942, 81-83, pl. VII:2, and 83-84, pl. VII:3, respectively.

71. Dendra -- Persson 1942, 32, 57, XIX, 124.

72. http://cameo.mfa.org/wiki/Jadeite. Can be grass- or emerald-green, but also purple, blue, gray, black, white, red, pink, and orange. Last accessed spring 2013

73. Dendra – Persson 1931, 32, 57, 124, pl. XIX.

carnelian with two bulls.[74] One made of lapis lazuli depicting two bulls was found on the floor of the chamber[75] for a total of 15. Of these, all except for the one lapis lazuli and possibly the three jadeite ones had a red or red-brown, a brownish/ green or gray-green hue and all had land animal motifs. Of interest of course are the lions and bulls associated with the 'king' and 'queen' as well as the majority of domestic animals on the jadeites. No blue (except for the lapis) or sea-green stones, no marine motifs.[76] Thus, though a small sample, these sealstones seem to corroborate Shapland's observations and Chapman's idea of non-verbal agency: it seems possible that through the hue and motif, the sealstones communicated both general/ sensory and explicit messages of land ownership (the basis of economic wealth and power), perhaps of bravery and strength, maybe hunting. We can only guess at the connections to the deceased's family, background, position in life, activities, but it was surely a message received by all the viewers.

As for white/light, black/dark and yellow/gold, far and away the hues of choice, it is easy to put a great many interpretations and guesses on their symbolism and the material meanings, but as this would only be guesswork, it should be avoided.

Value and hue

As almost all the objects involved in the burial were shiny, not much can be said for any specific combination of value and hue. There is one negative example, however, which seems to transmit a message through its form, its material, its value and its hue. This involves spindle whorls/conuli: almost every grave in all the sites and locations studied here contained at least one shiny, dark, conical, steatite spindle whorl. One might think that these were put into the tomb by family members who wished the deceased (probably a woman, but not necessarily) being buried to have them in her next life, a reasonable assumption. If that was the case, they would communicate womanly virtues such as spinning (and by association, weaving), providing for the family, possibly the shine of light but the black of the tomb: thus, a perfect grave gift — the right hue, the right value and the right message. However, in several ChTs from Dendra, there also appears in addition to the default dark steatite spindle whorls, another type, shanked, matte, light bluish- or greenish-gray stone spindle whorls: ChT I, 4 or 5 gray matte,

74. Dendra – Persson 1931, 38, 58, pl. XIX.

75. Dendra – Persson 1931, 29 (10), pl.-XXV:2.

76. Although in my opinion, green could as easily represent land occupations such as farming or land ownership. This seems to be the case as the motifs are all land animals, contrary to Shapland.

7 dark shiny;[77] ChT III, 2 and 7;[78] ChT VIII, 2 and 5 and ChT XIII, 5 and 10.[79] What to make of these? To be sure, they might have had no special significance and simply had been used to spin a much thinner thread by the same fine spinner-weavers –a sign of the deceased's status as expert spinners and perhaps weavers, as this type of whorl produces a much finer thread for very high quality cloth.[80] However, the fact that they are not shiny in a world of shine, and not yellow or black or white in a sea of yellow-black-white must have significance.

In two articles about buildings as persons, V-P. Herva says, 'The incorporation of artefacts into architecture transformed parts of the people associated with those artefacts into parts of building themselves, ….'[81] and 'The incorporation of objects into the structure of buildings would have infused architecture with whatever (relationally constituted) special properties the deposited things were considered to possess. … Houses … as a nexus of social life, deeply immersed in social relations. [They are] parts or extensions of the people who build and inhabit them.'[82] While the stones and buildings did not become people, obviously, they became infused with, or represented people. Although only a guess, the thought arose that these atypical spindle whorls (as understood by the viewers exactly because of their atypicality) were meant not to accompany dead expert female spinners and weavers into the next life but could represent real, living women — the (living) wife, mother or daughter of the deceased, buried symbolically with him/her to accompany him on his journey. Their oppositeness –instead of high value, low value (matte); instead of yellow-black, blue- or green-gray, a unique hue; instead of the usual conical form, just the inverse, a shanked, small-holed one - could have transmitted a message all its own - that these are different.

Global-local
This small study of burials in three settlements in a limited part of the Mycenaean region in the LBA shows, if not globalism, at least regional similarity in the manner of elite burials. The physical tomb architecture is the same (as it is for most elite Mycenaean burials): chamber tombs dug into a hill or a slope with a dromos and a stomion and the occasional tholos tomb, also with a dromos and a stomion.[83]

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77. Dendra – Persson 1942, fig. 58.
78. Dendra – Persson 1942, fig. 62.
79. Åström 1977.
80. Andersson 2003.
81. Herva 2005, 224.
82. Herva 2010, 448.
83. RT Dendra *c.* 17 m. in length, Persson 1931, 19 and figs. 16, 20.

Regarding color, we find again certain trends in common – far more finds have medium-high than matte value. However, as is seen in Fig. 4, Asine and Dendra (both ChTs and the RT) are similar in having only 2% (Asine) – 4% (Dendra) low value, while the ChTs at Berbati have almost 12%. Regarding the hues, there is similarity in the top three hues, but differences in the placement of yellow/gold and black/dark between Berbati and the other two villages in the distribution, and in the Berbati ChTs, blue is as important as gold, with black three times as recurrent (see above, *The analysis results* and Fig. 3d). One could draw the conclusion that Berbati was a poorer village (less metals, gray whetstones and pebbles, far fewer objects per grave) but still following the main conventions of the culture as well as they could. At Asine, as mentioned above, it appears that there were differences in the types/categories of gifts from ChT to ChT, probably family graves with different profiles.[84] While there was somewhat more variety in the hues found at Berbati, there were many fewer objects in the graves and they seemed to be poorer.

The sample in this study is far too small to say anything about global (=Mycenaean) or local, but if I were to choose, I would say that signs point to globality rather than localness: a matter of variations on a theme, well larded with similarities in physical burial form — elites buried in costly chamber or tholos tombs – and in grave gift color. Berbati varies somewhat, but it is a question only of degree. The differences in color are more likely due to less metals in the graves (yellow and white) in Berbati, perhaps for socio-economic reasons, and the burial rituals were probably similar.

The burial as a drama of death in three acts
The drama of death and burial[85] – the procession from the settlement to the necropolis,[86] the ceremonies and actions in the liminal area (the dromos) between the settlement (this world) and the grave (the next), and the entrance via the stomion into the tomb which is then sealed can be seen as a drama in three

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84. Gillis 2013, 83-85.

85. The following hypothetical scenario in three acts is based on three Argolid LBA sites, Asine, Berbati and Dendra, but is undoubtedly applicable to many others.

86. To see the relation between the settlement and the cemetery, see <u>Asine</u> – Frödin and Persson 1938, 295, 298ff; Styrenius 1998, 57,67, fig. 2, pls 1-3. <u>Berbati</u> – Säflund 1965,fig. 1; Schallin 1996,123-4, fig. 1, 125. <u>Dendra</u> – Persson 1942: 17, Figs. 18, 19; Åström 1977, Fig. 1 for topographical maps and photos.

acts.[87] Each act has its own plot, its own characters, its own associations, its own dynamics. The first act starts with a procession from the settlement or repository for the deceased to the burial ground. The deceased is most likely borne on a litter or transported in a cart together with the burial gifts and is wrapped in a white shroud (apart from any other reasons, linen is difficult to dye), with small, applied, stamped gold decorations - rosettes or other forms[88] - gleaming and flashing in the sunlight. The dancing lights from the reflections of the sun on the shiny objects on and next to the deceased seem almost alive and give the deceased's body the illusion of life in the sparkling light: life and light in death. All the dark objects (which were plentiful but usually small) accompanying the deceased on the litter perhaps also indicate that the ultimate goal of this procession is the dark grave and the eternal life after this one. Behind the deceased are the family, the friends, the village people. They are perhaps singing or chanting, accompanied by musical instruments as they temporarily leave their normal lives to enter into a liminal state, a transition between states.

The second act starts when the deceased, the other participants, the gifts and most likely ritual paraphernalia arrive at the dromos of the tomb. In this transitional area, partly in sun, partly in shade, some forms, details and colors are naturally subdued at times, in keeping with the passage from life to death (Fig. 7). Assumedly the participants are well aware of the liminality of the area, of being between two worlds, but the subtle shifts of light and dark, of hues, shine and even intensity as brightness fades and returns again enhance this awareness, as does the feeling of confinement in this narrow, coffin-like space. The gaping black hole at the end of the dromos serves as a constant reminder of the setting and the reason behind it. Subtle messages are thus transmitted and/or afforded by the material objects, the natural lighting and the setting. It is assumed that rituals

87. This tripartite division was first taken up in a book entitled *Les rites de passage* by Arnold van Gennep 1909 (first in English in 1960). He talks about '… rites of separation from a previous world, *preliminal rites*, those executed during the transitional stage *liminal (or threshold) rites*, and the ceremonies of incorporation into the new world *postliminal rites*,' from the English translation of 1977, 21. While these rites of passage are of course important for the deceased, going from this life to another state, they would also apply to the other participants in the rites, who go from an existence with a Persson to one without him/her. I thank Fredrik Ekengren for pointing out this source to me.

88. See, e.g., Dendra - Persson 1942, pl. XXVII.

Fig. 7: *Dromos of a chamber tomb from Asine, Necropolis I (photo: author)*

and ceremonies are held here, including eating and drinking.[89] Funerary feasting and ceremonies heighten '…bodily senses, feelings and emotions … In these sensory episodes bodily memory is generated…' involving sensory and bodily memory, '…important for identity formation.'[90] They are important factors in burials, reinforcing kinships and ties, traditions and memories. Thus, this area is a transitional phase between the present world and the coming one, guaranteed to heighten the senses, memories and emotions in all ways. Clearly, sensory stimuli are very important – the tastes of food from the ritual meals, the smells of cooking, the swirling smoke and the heat of the fire. Visually, the occasional flashes of sunlight, of *shine*, as the sun moves across the sky illuminating different parts of the dromos and the grave gifts awaiting deposition in the tomb, while other parts with their deep and narrow walls undoubtedly create an atmosphere of darkness and mystery. Perhaps even the various hues act as stimuli, as do the sounds of voices reverberating back and forth from the dromos walls, the reflections of light from the shroud and all the shiny objects for the deceased, the crashing of vessels being smashed, the presumably gaping black hole soon to be closed – all the senses are heightened.

These spatial, sensory and material properties, the 'scenery' in our drama depicted above, can be used in various contexts '…to facilitate perception by directing attention and offering … cues for action. Two obvious examples are size and colour… .'[91] 'Colour, brilliance, translucence … could have stimulated the senses,'[92] while 'sounds, smells and appearances, sight, movement' are important.[93] The importance of 'flavours, colours and smell' is discussed.[94] The total sensory experience in this, the middle act, would heighten the mystery of being in a special state.[95] An extra dimension is added by Turner, who sees ritual composed of two opposing but interconnected poles: that of social organization, morals, norms combining with the sensory pole of materiality, physicality,

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89. E.g., 'a large number of stemmed goblets' in the stomion of ChT VII, Dendra (Dendra - Persson 1942, 32); '200 fragments of stemmed cups, or about 40 vessels' in the stomion of ChT 13 (Dendra – Åström, 72), 387 fragments of cooking vessels in the dromos of ChT 14, (Dendra - Åström, 112); 'Immediately in front of the blocking wall, … there was a layer of ash and charcoal extending for a few metres out into the dromos … obviously consists of the remains of a sacrifice … .' Dendra - Persson 1942: 53.

90. Hamilakis 2010 (2002): 20 in speaking of BA Crete.

91. Malafouris 2012: 79.

92. Morris 2004, 36; see also Hurcombe 2007 and her bibliography, 541-5.

93. Gosden 2005, 202, with four sensory effects, n. 18 above.

94. Robb 2010, 511.

95. See, e.g., Morris 2004; Gosden 2004; Herva 2006a and b.

emotions.[96] Whereas the hypothetical procession through the town would belong to the factual, social world with its norms and *comme il faut*'s, this middle act would turn more to emotions, materiality, the non-rational world of the senses. Rituals or ceremonies that were presumably performed here also added to the sense of other worldliness with their aura of performative and experiential participation. People reacted to and interacted with the transmitted messages and stimuli of light and darkness, of the natural and supernatural, and of the world around them contrasting with the black hole of the grave and the afterlife – all this inherent in and communicated by the occasion of the burial - the setting, the sensory input – and the presence of the deceased, who is simultaneously subject and object of the drama.

Having concluded the second act, it time for the passage into the third and final part. This last one begins by bringing the deceased and the gifts accompanying him into the tomb through the gateway separating the spheres, the stomion, and placing him (and them) in his final earthly resting place, probably with chanting or singing and the performance of rituals. There is evidence of fires in pits[97] inside the tombs or a hearth[98], though whether for fumigation, rituals, meals, or other purposes is not known. The gifts were arranged on and around the bodies (by someone — family? officials?), as seen in the Royal Tomb at Dendra, the only tomb studied here which was used within a narrow time span and contained few (three) and relatively undisturbed burials.[99] Questions concerning who entered the still-open tomb, what they did, and why must remain unanswered. It could be hypothesized however that officiants were the only living people involved in this transition from the liminal to the final. Only those with a kind of divine *laissez passer* could return from the world of the dead into the transitional space. In any case, this particular metaphysical passage ends with the physical sealing up of the stomion. It is probable that the breaking of goblets and plates occurred now: as seen above (note 27) vessels were often found smashed at the base of the sealed stomion. This might be perhaps to symbolize the final break with the deceased or to insure that no one would use these liminal vessels again. It is now that the final act begins, in which all the living participants leave the liminal area and return back to their lives in the world of the living and the deceased begins his new existence in the realm of the dead, whether in the tomb itself or transported to another sphere.

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96. Turner 1967, 54
97. E.g. Dendra - Persson 1931, 18.
98. Dendra – Persson 1931, 80, for ChT 2.
99. Dendra - Persson 1931, 28, fig. 22.

This hypothetical 'drama of death in three acts' is based on an integration of several aspects: the material record, the use of shine and hue, the materiality and agency of the material objects in their contexts, and the importance of sensory impressions.

Final words

This study revolved around the colors of objects placed as grave gifts in the LBA chamber and tholos tombs at Asine, Berbati, and Dendra. The question was asked earlier whether the application of a theoretical foundation of materiality and agency could 1) offer broader interpretative possibilities for understanding displays of hue and shine rather than merely guessing what symbolism a certain hue might have had for the Mycenaeans and 2) add other dimensions beyond the conventional interpretations of anthropocentric manifestations of kinship, status and power in LBA Argolid burial contexts. The aim of the discussion of theories of symbolism, materiality, affordances, and so on was not to debate the virtues or flaws of the various theories, but merely to take up some theoretical frameworks that could be applied to the results of the analyses.

The results of the empirical studies of hue and value (shine) indicated they were important parts of the Mycenaean burial, at least in the three sites studied. In my opinion, it seems that as far as both hue and value are concerned, there was intentional, explicit symbolism in the choice of hue and in the overwhelming amount of shine/glow from the materials, totally apart from any display of family wealth, prestige and power through the gifts, their nature, their materials and even the burial itself. It is impossible to be able to identify the specific meanings in this symbolism, unfortunately, as one can do with literate societies: they could be connected with the burial ritual and the customs, or perhaps shared social beliefs. Applying aspects of materiality and agency vis-à-vis both inanimate and animate objects, as well as sensory perceptions, memory and emotion to these results can help us to recognize a new dimension, one of unintentional, perhaps even subconscious, symbolism and message transmission that could very well have heightened the intercommunication between the burial, the ritual and the participants. Thus, an awareness of the possible roles of both intentional and unintended color symbolism combined with the ideas of materiality and agency as discussed above can add an extra dimension to our understanding of Late Bronze age burials in the Argolid.

An attempt to illustrate this is seen in a hypothetical reconstruction of a (typical) chamber tomb or tholos burial. The funeral itself was divided into three (hypothetical) parts, the procession to the burial ground, the liminal stage in the dromos between this world and the next, and the third and final one, the

placement of the deceased and the gifts into the tomb and then sealing it. The values (shininess) and hues of the objects decreased from the initial stage of total brightness in the outdoors and the daylight through the intermittent, muted shine and hues in the liminal world of the dromos to total blackness as the deceased and the grave objects are placed in to tomb and the opening sealed off. Thus, kinship identification and socio-political status intertwined with the symbolism of the colors, emotions, sensory reception and memory,[100] facilitating and heightening the experiential response of the participants and implementing interactions and engagement between the human and material agents.

While naturally three sites in a small area of the eastern Peloponnese do not warrant any discussion of 'globality', the general similarities between three somewhat different but culturally related sites might indicate a general Mycenaean pattern of elite burial with small variations. Turned around, if one did not know anything about these three sites, one would easily be able to connect them all to the same culture, at least by observing the burial practices.

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100. Turner's (1967, 54) bipolarity requirement for ritual, social organization at one pole and emotion at the other.

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