

**“A Shining City on a Hill”:
Interpreting the material interactions of the Keros-Syros Culture.**

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"A Shining City on a Hill"

Interpreting the material interactions of the Keros-Syros Culture.

Abstract

The Keros-Syros culture developed in the Cycladic Islands during the Early Bronze Age (EBA). Material traces of this culture include finely worked marble artefacts, and complex settlements such as Dhaskalio-Kavos and Skarkos. Existing interpretations of this culture follow three broad paths; detailed excavation records, broad narrative interpretations, and more detailed interpretations of specific facets of the culture. This dissertation falls mostly into the third category and will examine the material interactions of this culture with the marble of the surrounding Aegean environment, addressing not where or how it was sourced and how was it worked, but rather the more difficult question of why Keros-Syros people chose particular types of marble for culturally specific purposes, and sometimes did not. This aspect of Keros-Syros culture has been touched on in previous scholarship but not examined in any significant depth. Evidence is primarily drawn from the extensively excavated joint site of Dhaskalio/Kavos and focusses on two areas; the iconic marble figurines and almost translucent marble vessels, and the use of fine white marble for masonry in the terracing and walling of Dhaskalio. The physical interaction of the Keros-Syros people with marble is examined firstly through the objects they co-created with material, and then in the places of marble they created. The physical, sensory, cognitive and emotional impacts that could have combined to form and influence individual and cultural identities are then considered via a mix of materiality theory, landscape and ethnographic parallels. Complexity theory is a continuous theme throughout the text. In summary, no definitive conclusions are attempted, and perhaps never can be, but questions about how the people of this distant, fascinating culture could have viewed their material world are constantly raised and discussed.

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DATING CONVENTIONS

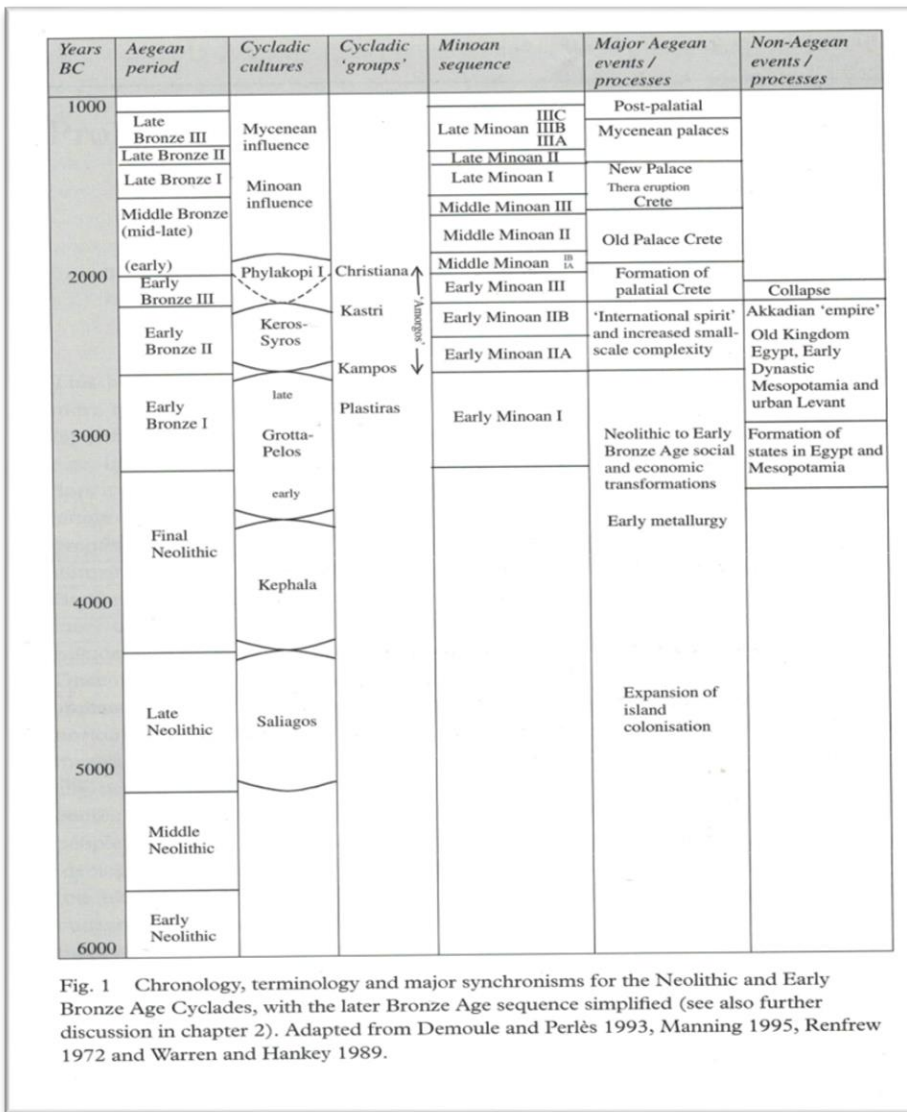


Fig:1. Dating conventions (Broodbank, 2000: xviii).

Phase A	Keros-Syros culture	2750–2550 BC
Phase B	Earlier Kastri Group	2550–2400 BC
Phase C	Later Kastri Group	2400–2300 BC

Fig:2. Cultural phases at Dhaskalio-Kavos (Renfrew, 2018: 549)

ABBREVIATIONS

BCE	Before Common Era
EBA	Early Bronze Age
EBA I, II, III	Early Bronze Age I, II, III
EIA	Early Iron Age
FAF	Folded-Arm Figurine
FN	Final Neolithic
LN	Late Neolithic
PPA	Proximal Point Analysis

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I also have enormous admiration for the painstakingly thorough and intuitive work of generations of archaeologists and historians. We are standing on the shoulders of giants.

And for her patience and continuous support throughout this degree program, my thanks to my wife.

Rack your memory for lost ancestors,

It can only tell you they are gone.

Abu Al-Ala Al-Ma'ari, "Birds through a ceiling of alabaster" c.1020

Introduction

Marble permeated the Keros-Syros culture, present in the architecture of the settlements, in the artifacts of everyday life, as objects mediating ritual events, in trade and exchange networks, in the objects accompanying people into the afterlife. Other materials such as obsidian and ceramics held importance in specific aspects of this society, but the archaeological record suggests that exceptionally pure white marble was a material of special significance within the culture. Aspects of this cultural entanglement with marble have been interpreted at length (Colin Renfrew, Cyprian Broodbank, Alexander Aston to name a few), but mostly from descriptive, evidential perspectives that focus on meanings and objects rather than materials. In contrast, this thesis will concentrate on the material, marble itself, and examine why very specific types of marble were preferred for specific uses within the Keros-Syros culture. The first focus is the finely sculpted marble vessels and figurines produced by this culture and found in such quantity at Kavos, and the second is on the fine white marble facing the massive external masonry of the settlement of Dhaskalio.

This thesis initially gives some brief overviews of the limitations of the archaeological record, the Aegean environment in the EBA II, and the development of human settlement in the Cyclades. The physical evidence is next outlined, the marble objects this society created, and the places they built from the marble in their environment. How Keros-Syros people physically interacted with the material through vision, touch, manipulation and construction is then discussed. The cognitive facets of these interactions are interpreted, the visuality and aesthetics of the material and object, the emotions and desire that are engendered. How ritual

and the surrounding Aegean environment might have mediated these human/marble interactions is considered.

Three broader themes run through this thesis. Firstly, the need to avoid reductive, singular explanations and instead focus on cultural complexity. Secondly, a focus on important differences between Dhaskalio and other Keros-Syros sites, including Skarkos, Ayia Irini and Kastri. Thirdly, the use of brief ethnographic parallels to indicate the possibilities open to Keros-Syros individuals and wider society.

No conclusions are drawn as such, and perhaps never can be, so some possible interpretations are summarised and discussed, and finally some thoughts on how the people of this distant, fascinating culture might have related to marble in their everyday lives are outlined.

Chapter 1. The Kero-Syros World

Evidence and Interpretation

The Keros-Syros culture dates back four thousand years old, and most surviving material traces are at best degraded, fragmentary or incomplete. As the Aegean basin sits within an active tectonic margin, geomorphological events such as landslips, altered run off patterns and sea level changes occur continuously, often degrading sites and stratigraphy (Renfrew *et al*, 2013:19-56). Widespread, indiscriminate 20th century looting of Keros-Syros sites has destroyed much and sometimes all stratigraphy of the looted sites (Broodbank, 2000:4-5), particularly the special deposit south at Kavos. Overall the archaeological record is incomplete and badly compromised at best.

Keros-Syros society was pre-literate, so we lack primary explanations of the ritual and conceptual life of their culture. Ethnographic studies offer comparisons but given a chronological distance of over four thousand years are better regarded as possible scenarios. Significant, but more subtle issues around interpretation are the explanatory paradigms of modern scholarship which can colour our methodology and objectivity (Sonik, 2021:530). An example is the modern conceptual separation of art and utility (Eloise Goviers “Cartesian cut”, 2016:24), for example, that obliges us to place objects and actions into categories that did not exist in the creating culture, removing the context necessary for understanding, a point also made by Pierre Bourdieu (1977:3) about the primacy of objectivist knowledge. Unworked artefacts can be ignored within excavations, and entire aspects of sites can be ignored because they do not meet modern preconceptions of significance (Sonik, 2021:530). The holistic, multifaceted analysis that should be applied to cultural complexity is often lost because, despite the best intentions, mindsets and methodologies are inescapably products of a prevailing culture.

Any examination of the Keros-Syros culture contends with incomplete evidence, unanswerable questions, and culturally based suppositions. All these issues are highlighted within this thesis.

The Aegean in the Early Bronze Age

As noted, the Cyclades lie across a geologically complex zone. Overlaying basal granites and schists, the pervasive Tethyan carbonate sediments are often wholly or partly metamorphosed, which together with the numerous igneous intrusions and extrusions present widespread mineral resources (see Figs. 4-6). Given the varied topography typical of active fault zones these mineral resources are not always easily accessible or workable, and this patchy spatial accessibility (Broodbank, 2000:76-80) could represent a major driver of the patterns of intercommunal exchange evident from increasing inflows of non-local items in Keros-Syros sites (Broodbank, 2000:46-47), as well the development of navigation (Tsampiri, 2018:40).

From the early Dryas period of the Holocene onwards (around 10,000 years BCE) sea level rise altered the landform of the Aegean basin to a series of island chains within the shallow northern shelf of the Eastern Mediterranean (Renfrew *et al*, 2013:19-56). A typically Mediterranean climate developed with cold Balkan winters and hot dry summers, with a particularly vicious drying, northerly wind, the meltemi, blowing off the Balkan massif exacerbating the climatic effects of scarce rainfall (Broodbank, 2000:77). Little precipitation is retained as surface water, particularly problematic on the smaller islands where a lack of elevation and size precludes the formation of permanent watercourses. Poor soils and uneven topography limit workable agricultural land, which when present is often difficult to access with intermittent water supply. In this semi-arid environment, the resulting predominant ecology of the smaller islands is a low, dense mediterranean scrub that without human intervention supports limited flora and fauna. Additionally, the Aegean is a sparse fishing ground (Broodbank, 2000:85), making marine food an unreliable food resource except for the smallest communities. This was and still is a precarious environment for permanent human settlement, and whilst permanent settlements were present on the larger more resource rich islands (e.g.

Paros and Naxos) from at least the LN onwards (Broodbank, 2000:45), the majority of smaller islands were probably only visited occasionally until orchard husbandry of the grape and olive (both of which are calorific) and animal husbandry reached the Eastern Mediterranean during the EBA (Broodbank, 2000:45-46). An agricultural package including animal husbandry not only enabled human settlement to exist, but to expand as draft animals can improve soil fertility, provide labour for terrace construction and food transport, and be an emergency food resource (Halstead & Jones, 1997:288). Present-day settlements on the smaller islands are still subject to these environmental constraints, where for land to remain in cultivation livestock are essential as heavy modern machinery is often impossible to use due to the terrain (Halstead & Jones, 1997:286-288).

Human population densities increased on the Aegean littoral and the Cyclades from the LN onwards, with evidence of growing intercommunal contacts and the emergence of seafaring, including evidence of further colonisation, and increasing long-distance trade (particularly Melian obsidian and metal ore and objects, (Tsampiri, 2018:36; Nazou, 2019:153-157; Capra, 2025:14-16). Drinking vessels of non-Cycladic design appear from the EBI onwards, as do vine leaf impressions on pottery, both implying wine consumption (Broodbank, 2000:45). The resulting social and demographic changes probably drove integration of the Aegean into the surrounding Near Eastern 'world-system' (Renfrew, 1994:10; Sherratt and Sherratt, 1991:367-8).

In the EBA the available sailing technology was oared longboats and canoes. Together with increasing settlement size and social stratification (Nazou, 2019:162-164), there is clear evidence of longboat voyaging – particularly from the Strophilas settlement on Andros (Nazou, 2019:158-162). Operating within a limited yearly window of opportunity for voyaging, the systemic problems presented by the environment would only have been more severe. This environment created a geographical mosaic of settlements sharing scarce resources, driving the creation of a voyaging culture out of sheer necessity. Cyprian Brookbank (2000:21) conceptualised this intertwined horizon of land and sea, humanity and natural world that transcended traditional boundaries as an 'island-scape'. This matrix of spaces and places also reflects the theoretical point of Edward Casey (1996:42) that the absence of spatial boundaries

is the “fundamental porosity necessary for permeable margins of transition and exchange to exist”, neatly mirroring environmental impacts on Keros-Syros society.

A more subtle consequence of geomorphological/environmental constraints in the EBA would have been the pressure exerted on each individual, family, and settlement to cooperate in managing their limited resources, prompting effective self-organisation and cooperation. As with the environmental constraints on inter-settlement transport, this would have favoured the development of strong inter-communal bonds. Resource disparities between large and small islands and settlements would have created matching disparities of environmental vulnerability, with the larger Cycladic islands generally, but not always in every respect, being better resourced and more resilient (Broodbank, 2000,237-238). Population demographics would have also reflected this, as would actual life experiences, with islanders living near Zas on Naxos probably more accustomed to mountain life than seafaring, and having access to more agricultural produce. In this difficult, challenging, environment with a patchwork of varying resource bases, communality and cooperation was a critical prerequisite of individual and group survival and prosperity to the Keros-Syros culture, as it is in the Aegean today (Halstead & Jones, 1997:286-288).

The developing Keros-Syros society was, as Cyprian Broodbank points out, the first properly pan-Cycladic culture, although one still so artefactually and spatially variable that the label culture here is much debated – not least by Cyprian Broodbank himself, who preferred the description “prestige” culture (2000:54).

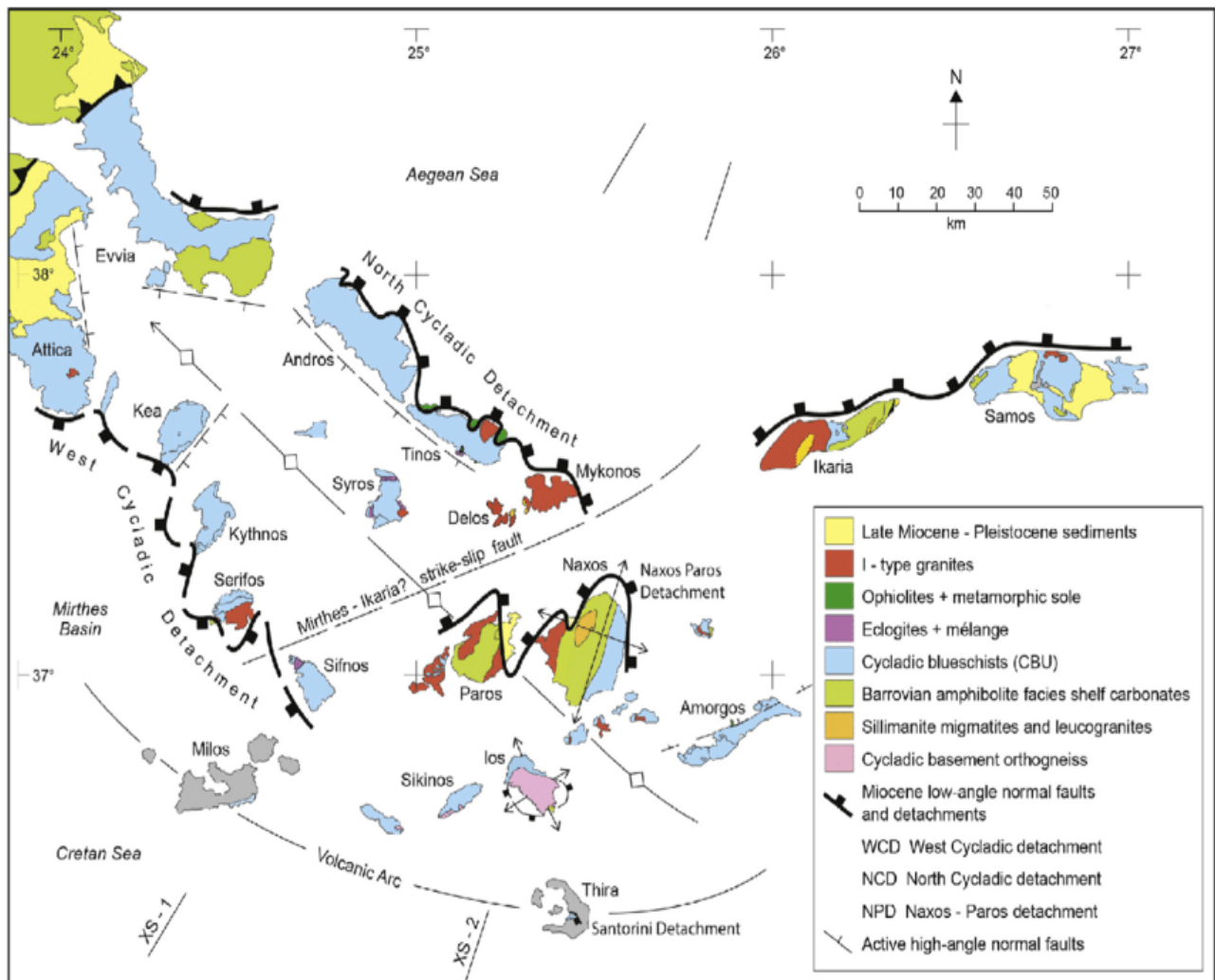


Fig: 3. Geology of the Aegean (ResearchGate, accessed 19-01-2026)

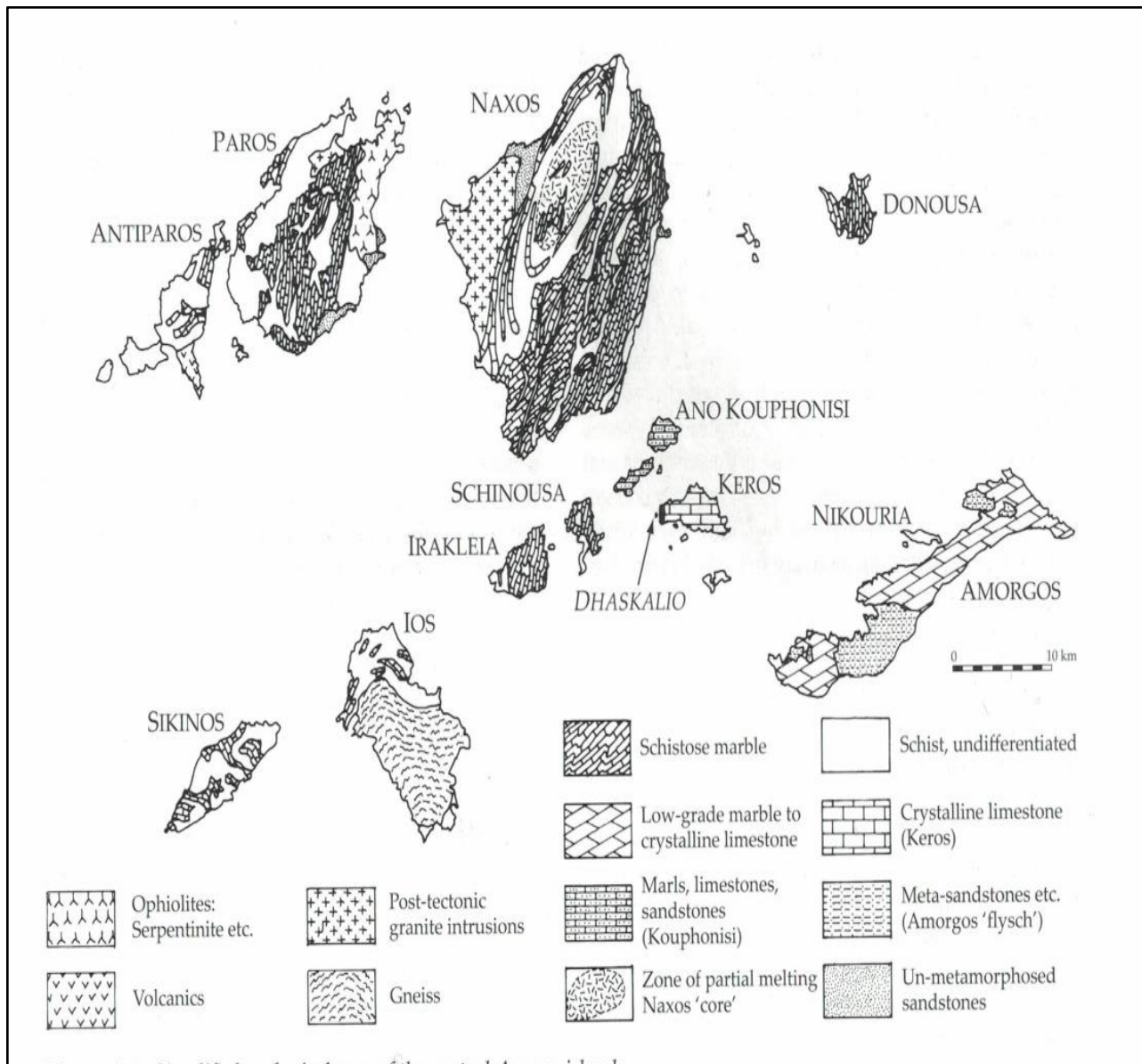


Fig. 4: Geology of the Inner Cyclades (Renfrew et al, 2013:21)

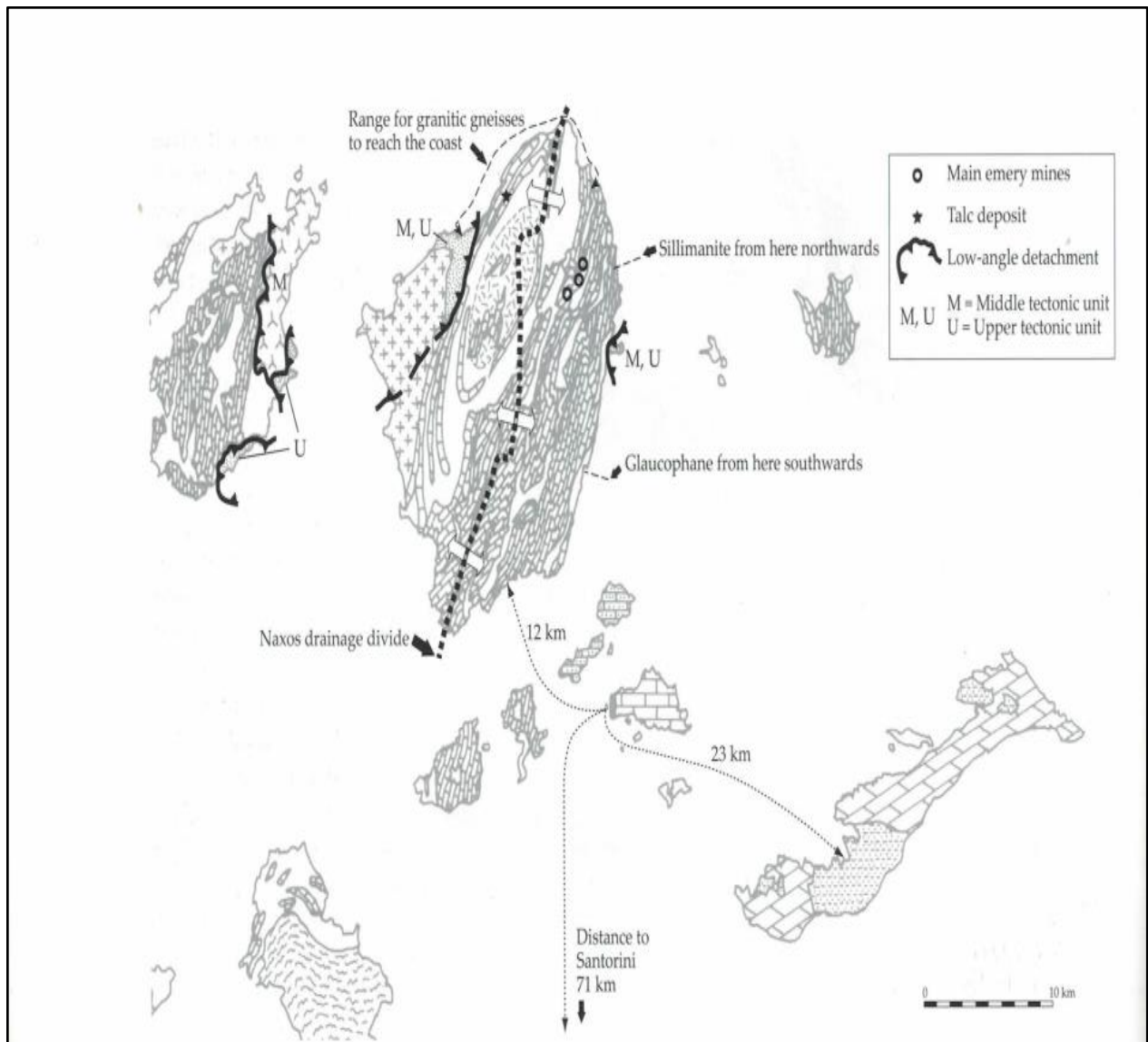


Fig. 5: Mineral resources within the Inner Cyclades. Lithological units as per the legend in Fig. 6.

(Renfrew et al, 2013:22).

Geology

Marble is the metamorphosed product of a discontinuous range of (primarily) calcium carbonate sedimentary rocks ranging from chalk to limestone and dolomite, often inter-stratified with other minerals and lithic elements. The heat and pressure of tectonic processes transform, metamorphose and harden the original protolith into new mineral, with any mineralogical impurities (commonly silt, sand or iron compounds) from original strata also being melted, mobilised and re-crystallised as striations. The resulting 'saccharoidal' marble has a hard interlocking crystalline structure, normally with a uniform multi-directional granular composition. However, in the Cyclades less intense metamorphism from secondary compression and heat from repeated tectonic action sometimes produces 'schistose' marble with pronounced cleavage planes ideally suited for masonry, and coarse 'brecciated' marble composed of crystalline fragments in a carbonate matrix results from degrees of pressure shearing. Outcrops of these differing protoliths occur throughout the Aegean basin (summarised from Dixon, 2000:19-24; Dixon and Kinnaid, 2000:25-44). Aegean marble grain structure varies from medium to large, grain sizes averaging between 1-10mm (discussion in Germann, 1988:152-156). This gives a hard, strong building material (Renfrew *et al*, 2000:715), and the large grain additionally means the refraction index – the degree to which light can penetrate the surface before being scattered – is lower, enhancing the inherent lustre of marble. For a hard stone, marble can nonetheless be carved and sculpted as the surface is easily worked with hard abrasives (e.g. emery or metal tooling) and polished to create a powerful visuality. Marble is hard yet malleable, and tolerant of the persistent repetition involved in fine sculpting and polishing, particularly when softened with water for lubrication – rain and surface water is a dilute carbonic acid and will mobilise calcium carbonate crystals within the marble grain structure, which will harden when dried.

Geological definitions are precise, but as Chantal Conneller (2011:4-7) outlines, this is a narrow, Cartesian definition which does aid our understanding of the meaning cultural concepts of the material, let alone the individual experiences of manipulating, handling or viewing the material. Firstly, many limestones and dolomites are only partly metamorphosed,

not fitting neatly into the geological category of marble, and other hard crystalline rock with similar appearance is often described as 'marble' in modern construction work, as with much 'marble' formerly exported from Palestine (Salem, 2021:1-3). As modern categorization of marble is a movable visual feast, we can also ask whether Keros-Syros society conceptualised and 'saw' marble as we do in the modern world? Were white pebbles picked from the Spedos Bay shoreline on Naxos because they matched a culturally situated ideal, because to them it was a specific material as opposed to just being round and white?? Or because their artisans liked working with that material? Did Spedos itself have a special significance in this society in the same way that Nicole Boivin stresses the link between ritual importance and mineral origins, not least in the case of Preseli Bluestones (Boivin, 2004: 10-13)? Or perhaps because suitably workable stone was so easily available on Naxos, with surface finishes ideal for decoration, that it was obvious to collect it when needed?

Whatever the rationale, the continued use of a significant, culturally valued resource from a particular deposit/location enhances the material and the significance of the source (Boivin, 2004:10-11), which as an important place in communal memory would become the preferential choice for usable and significant material. This links to Paul Connerton's description of social habit-memory, the way pathways and places/nodes within a landscape enter group consciousness and memory (1989:35-36). As the material traces of this culture are saturated with finely worked marble primarily from Naxos, it is clear Keros-Syros society knew what marble they wanted, and where it was. It was inside the consciousness of this culture.

Chapter 2. Marble Objects

Figurines

Anthropomorphic and schematic figurines are present in Eastern Mediterranean societies from the Neolithic onwards (Preziosi & Weinberg, 1970:4) and appear in Keros-Syros culture as grave goods, domestic contexts, and systematically fragmented in large numbers in the special deposits at Kavos.

The majority of FAFs, folded-arm figurines, (and other marble artefacts) in the special deposits at Kavos are made from pure white or very lightly banded white/grey marble originating from the south coast of Naxos (Renfrew *et al*, 2013; Papadatos & Vaneneris, 2017:483-4). Experimental archaeology has established that a figurine can be completed in under two weeks (Papadatos & Veneris, 2017:489) using emery abrasives also available from Naxos, and together with the typological variations tied to specific locations, evidence of a sculptor's workshop in Skarkos (Marthari, 2017:134-9), and emery found intermittently across Dhaskalio and other sites (Broodbank, 2000:79) this suggests figurines could be and were made within many communities.

Once made, evidence would suggest the figurines were integrated into the life of Keros-Syros society. Cyprian Broodbank (2000:263) notes the extensive evidence a use-life prior to burial/desposition. They were carefully repaired when broken (Fig. 9), often painted (Fig. 8) to depict body modification and scarification and open eye symbolism (Broodbank, 2000:248), the latter trend dating back to the Saligos culture in the Aegean (Aston, 2020:28). Figurines were also repainted, accompanied the islanders in burial (Broodbank, 2000:262-280), and were often intentionally fragmented and deposited in the Kavos special deposits. Most figurines are either female or ungendered, with a very small number of male figurines found (Fig. 11), and an even smaller minority of more complex figurines and groups also surviving (Fig. 12). At Dhaskalio all the figurines found were of a minimalistic schematic design unique to Dhaskalio (Renfrew *et al*, 2013:483-487) - similar to the Apeiranthos variety shown in Fig. 7 - implying a very personal mnemonic or apotropaic function. Together with body decoration, FAFs (Fig. 8) have no bases,

cannot stand unsupported, and suggest a very haptic, personal use. The rarer freestanding and sitting figurines could form linked assemblages, perhaps indicating a use-life of display. Within burial contexts, figurines are sometimes associated with concave marble trays (Fig. 14) which sometimes display pigment traces and corner perforations, implying use-lives as suspended cradles or mixing pigments.

This variety of designs suggests differing object lives, but all show a clear preference for white marble, with very few exceptions - two black marble figures were excavated at Skarkos (Marthari, 2017:134-9). Most figurines are small enough to be hand-held and carried, and whilst made from relatively hard stone are still thin and potentially easily broken, although (arguably) not being deliberately made to be so. Given their frequent repairs.

It is beyond the scope of this thesis to detail the multiple interpretations of the meanings and usage of Keros-Syros figurines, so just a few are briefly outlined here. Cyprian Broodbank (2000:174) suggests that the limited sizes of Cycladic settlements favoured the emergence of individual actors, with FAF body decorations representing individual, family and group identities, and possibly initiation marks relating to individual life thresholds. Together with the longboat symbolism on ceramic saucepans and increased circulation of copper/bronze weapons, he interprets the withdrawn stance of female FAFs as implying raiding and abduction (Broodbank 2000:253, quoting F. S. Sherratt). Drawing on ethnological parallels, Alexander Aston argues (2020:601-606) that figurines held significance in kinshipping exchange rituals to create trust and cement social cohesion. A very few figurines were large (over a metre high, see fig: 7), so are not easily held or portable, and as Elizabeth Hendrix (2003:437-439) proposes could have been cult objects, displayed or processed during festivals, with the repeated decoration being periodic renewals of unique community identifiers. Lucy Goodison (2008:430-431) sees figurines, and Cycladic representational art in general, as richly symbolic, with profound connections to sunlight and directionality. The evidence suggests a more accurate interpretation lies in a mix of any of these, and other, interpretations as the varied typologies and life-uses would imply different people and communities had different relationships with their marble objects.

These detailed, intuitive interpretations predominantly focus on just that, the object itself, somewhat the significance and cultural context of using marble. Alexander Aston does frequently note the agency of marble, but still focusses more on the impacts of the object on Keros-Syros society (2020:587-610). And marble is interesting here, for it presents an ideal surface for decoration and abstraction (Fig. 9), ritual display, life skills practice, and play perhaps, as marble can easily be wiped clean and reused. The opposite view of course is that so could other stone, hard glazed white ceramics, or highly polished metal?

The development of figurines (Preziosi and Weinberg, 1970:4) from the neolithic onwards within the Aegean (fig.7) implies the concept existed within this area of cultural exchange, but with cultures producing similar typologies but often using differing materials. Working marble within their own established artistic constraints, the Keros-Syros figurines were the end point of a development of marble figurines from the Neolithic onwards that suggests a gradual organic evolution. The persistence of incrementally differing designs supports this interpretation (Fig.7), as does a progressive trend towards less breakable designs (Getz-Preziosi, 1981:23-28). But white marble always remained the preferred material within Keros-Syros culture.

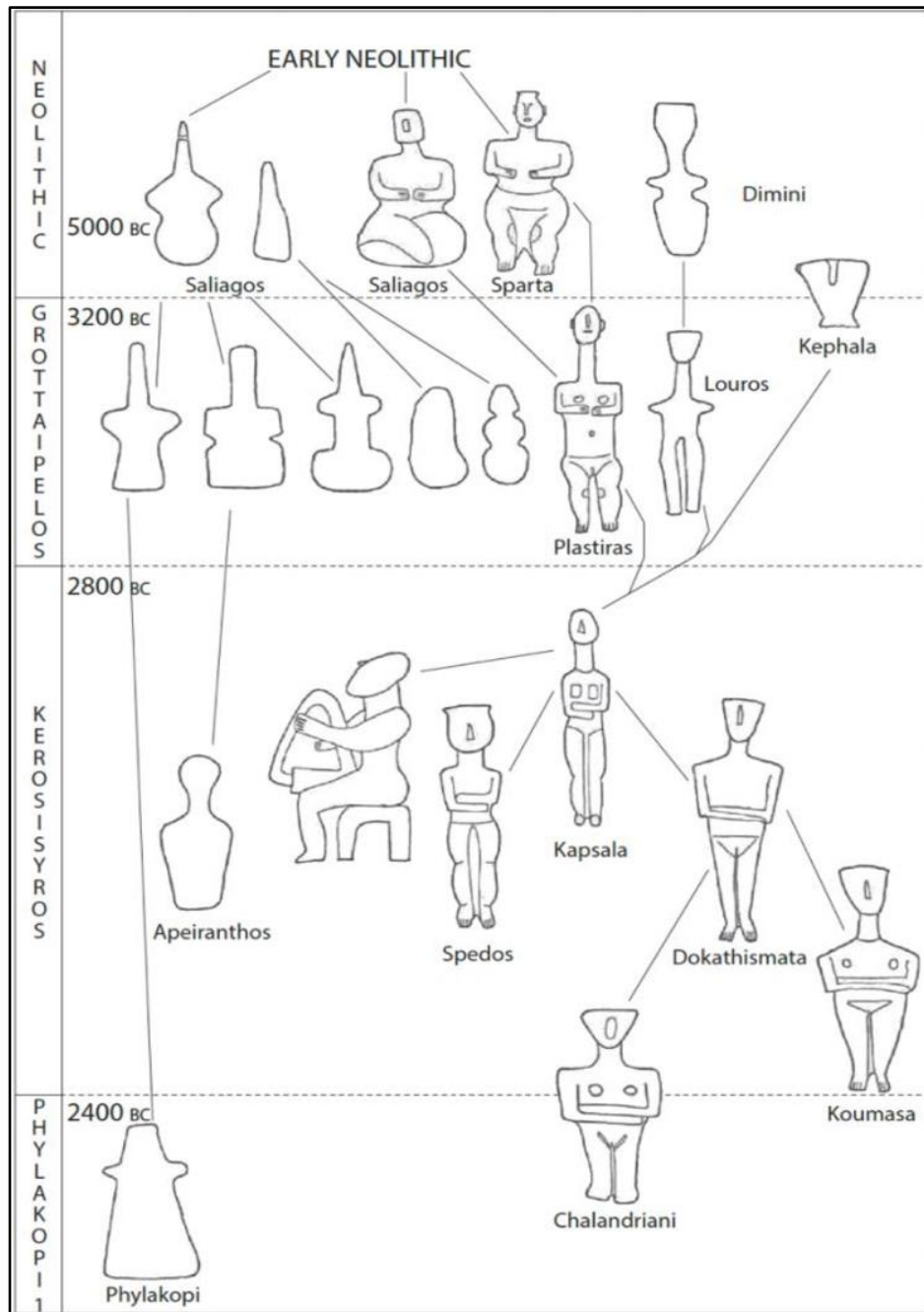


Fig. 6: Typology and development of Cycladic figurines (after Renfrew 1969:28 - ResearchGate, accessed 20-1-2026)



Fig. 7: Folded-Arm Figurine (Metropolitan Museum of Art).

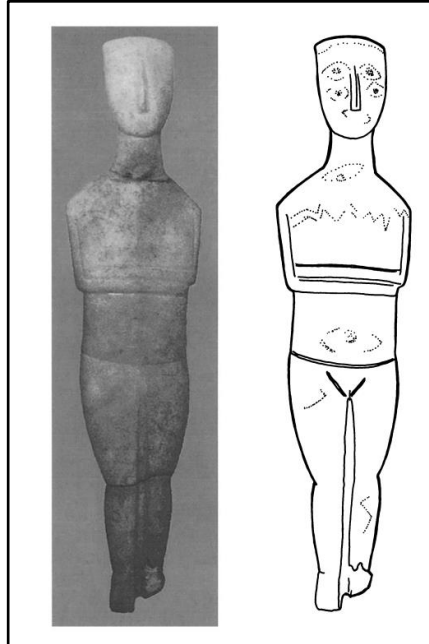


Fig. 8: Face and Body decoration (Hendrix, 2003:422)

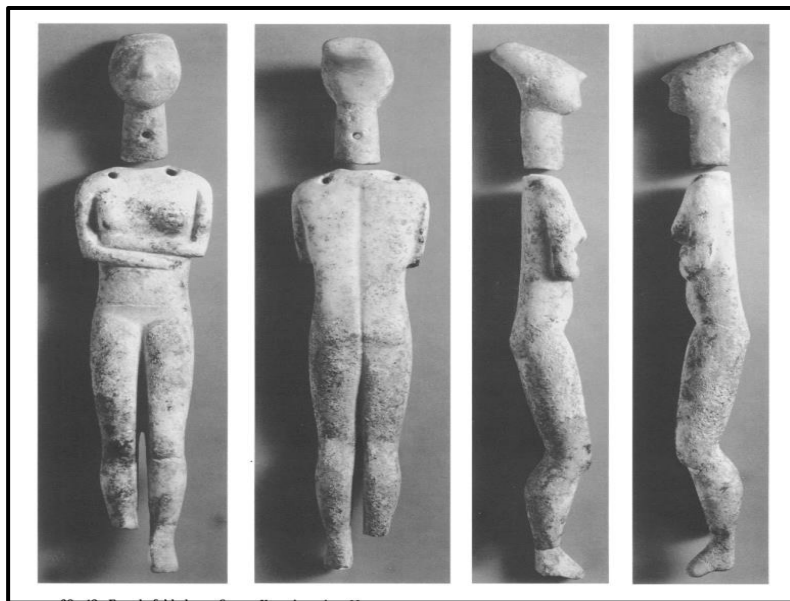


Fig. 9: Carefully repaired figurine (Getz-Preziosi, 1981:17)

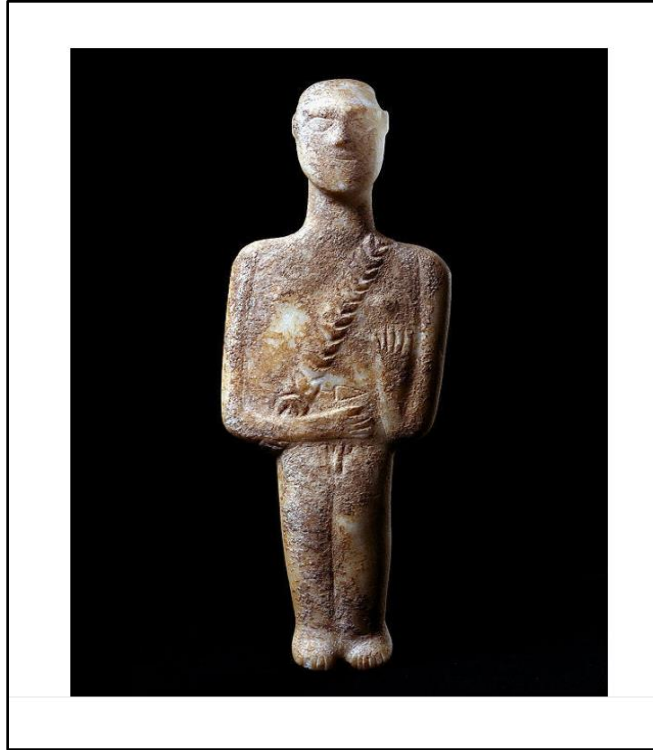


Fig. 10: Male 'Hunter-Gatherer' figurine (Museum of Cycladic Art, accessed 19-1-2026)



Fig. 11: Sitting figurine (Museum of Cycladic Art, accessed 19-1-2025).

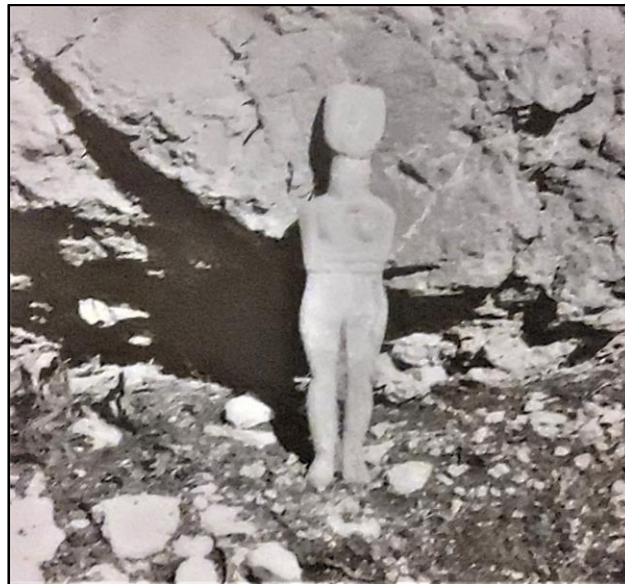


Fig. 12: Complete large FAF from the Special Deposits South (Renfrew et al, 2007:32).



Fig. 13. Marble Cradle/Pallet (Museum of Cycladic Art)



Fig.14. Head of Black marble figurine from Skarkos (Marthari, 2018:182)

Vessels

Finely worked white marble vessels appear throughout the EBA Aegean as grave goods (citations needed) and as occasional habitation deposits. The special deposits on Kavos contain many deliberately fragmented marble bowls and jugs, together with similar but nonetheless different forms in ceramics (unlike figurines, which are only present in marble). At Kavos the marble vessels have several common typologies, together with a very few fragmented rarer examples such as fragments of a fine 'dove' plate (fig.15). The typologies of marble vessels are consistent across the EBA Aegean (Gavalas, 2013:515-516), although at nearby Dhaskalio the vessels found are much plainer (Gavalas, 2013:505). However, Kavos represents a far greater single quantity of vessels than found elsewhere in the Aegean, where they are infrequent other than in funerary contexts (Gavalas, 2013:505). This statistical disparity and the find contexts would imply these vessels were significant both for individual and Keros-Syros cultural identity, Marisa Marthari (2018:184-185) suggesting prestigious, luxury tableware acquired for conspicuous, status enhancing display.

As with marble figurines, the manufacturing of these marble bowls, plates and jugs would have been time consuming, particularly so given the almost translucent finishes that were obviously preferred. This would also have incurred a lot of wastage, but it seems the Dhaskalio people were, like most proficient artisans, very practical, and broken, discarded or imperfect bowls and vessels were often repurposed as door hinges or masonry (Gavalas, 2013:515). There is at yet very little information on potential use-lives of the marble vessels, and so whilst the designs of the marble vessels could indicate domestic use, the predominant find contexts of either burial or fragmentation and deposition within a community archive strongly support ritual use linked to identity. The objects were finely made from a material – almost entirely white marble – that carried significant meanings within Keros-Syros culture. The lustre, finish and workmanship represent an “almost extreme demonstration of virtuosity” (Mary Helms, 1993 - quoted by Cyprian Broodbank, 2000:269) providing an aesthetic dimension matching marble figurines. These would have been precious possessions, making them even more significant when broken and interred at Kavos, or accompanying an islander to burial. It is hard to see these as just utilitarian artefacts.



Fig. 15. Marble Dove Plate (Museum of Cycladic Art, accessed 20-1-2026)



Fig. 16. Marble bowl (Museum of Cycladic Art, accessed 20-1-2026)

Making Choices

Why was white marble selected for figurines and luxurious, prestige vessels, as opposed to ceramics, wood, metals or other stone? White marble was easily available from Naxos, as was copper tooling, emery for polishing. Other stone was used very occasionally, as evident from the two black marble figurines from Skarkos (Marthari, 2018:181), but figurines appear not to have been made from clay/ceramics, wood or metal. This contrasts significantly with the mainland Greece and Crete during the EBA, where most figurines were produced in clay (Hendrix 433:412-413). Wood figurines might not survive interment in the desiccating Cycladic environment, but the absence of a single wooden figurine is telling. The Keros-Syros people were accomplished potters and metal workers in the EBA, with evidence of arsenical copper working from Keros phase A onwards on the Kavos promontory and Dhaskalio (Renfrew et al, 2013:711-713). Both ceramics and metal are easily workable and repairable, and can present paintable surfaces, so why use marble? Marble and emery abrasive are both available from Naxos, schistose marble from quarries, and clear marble pebbles on beaches of Naxos (detailed exposition in Tambakopoulos & Maniatis, 2017) Marble working/sculpting would have represent an established, culturally acquired skillset and familiarity with the material. But ease and familiarity are not always complete explanations, and do not here consider the agency and life histories of figurines within Keros-Syros society. Decoration, careful intricate repairs and wear patterns tell us these were valued personal possessions handled by people throughout their lives, accompanying them in death, or alternatively being deliberately fragmented and interred in the communal repositories of Kavos. Would other materials have accommodated these purposes, or were they not as acceptable to Keros-Syros culture as marble? From the material evidence we can infer that marble figurines and vessels were more worth making and repairing as they represented an established material human-material entanglement within Keros-Syros society. Arguably the object form only existed because of the repeated selection of a workable material, which then became the cultural norm acquiring symbolism, authority and agency.

Not all of these points do not apply to the quantities of fragmented jugs, vases and bowls deposited at Kavos. Simalar but typologically different, ceramic vessels were also fragmented

and deposited alongside the marble vessels, forming the majority of items. All the ceramics were imported, fabric analysis locating the majority of ceramics locally within the Cyclades (Broodbank, 2000:231-236). Notably, the ceramics originate from specific areas/settlements, and Cyprian Broodbank suggests this may be related to “a selective long-range acquisition of prestigious items” either by trade or ‘appropriation’ (Broodbank, 2000:235). Alternatively, the vessels could have been made in individual settlements, brought to Kavos quite willingly across generations, and deposited as markers of *individual community* identity, as opposed to wider Keros-Syros society. As with marble perhaps this was a human/material interaction producing objects with agency within Keros-Syros culture, but whilst the evidence from Skarkos (Marthari, 2018:181) implies marble objects were workshop produced by specialist artisans, pottery production in smaller settlements was probably common, an individual community task. Ceramic vessels and marble vessels were all significant to this culture, but arguably for different reasons and in different contexts, and both formed objects that enabled individuals to participate in group rituals and celebrations, and were equally valued during and after their use-lives.

However, sometimes the Keros-Syros people made very different choices. Common items within the Eastern Mediterranean and Balkans in domestic deposits and graves, the ubiquitous ‘sauceboat’ vessels are found fragmented in huge quantities in the Kavos special deposits (fig.32). Unlike the bowls and jugs just discussed, these are exclusively ceramic in the EBA Aegean (sheet metal examples - fig. 20 – are found in the Aegean littoral). Around 90% of the sauceboat fragments at Kavos are of local, Cyclades fabric (fig.33), with some fine Ufiris wares imported from mainland Greece (fig.33). Again, why was marble not used? Making a sauceboat from marble would have been substantially more difficult than using clay, but Keros-Syros artisans achieved much larger and more complex designs than sauceboats when required (e.g. fig.15). What might be more relevant here is the how sauceboats were tied to the development of viticulture, and so a consequential feasting and drinking culture, Andrew Sherratts “alcohol cult” (1997:390). This form of socially acceptable group enjoyment would have needed appropriate utensils, the sauceboat, perhaps in the same way that champagne needs a fluted glass - not a teacup (Sherratt, 1997:390-391). A sauceboat is a performative

vessel demanding a degree of extravagant individual display by the user (fig.), highlighting the participation of the individual (Sherratt, 1997:388), often including fragmentation as a mnemonic marker. Some sauceboats simply cannot be used for drinking and are obviously designed for display, implying further displays of individual status (figs.19 & 21). These were rituals linking display to social status and identity, part of an imported cultural phenomenon of the Eastern Mediterranean (Sherratt, 1997:390-391) using specific, exotic vessels. The importance of validating individual identity perhaps links to the increasing social stratification seen in the necropolis at Chalandriani (Hekman, 2003:59), evidence for extensive body modification (Carter,) and the mobilisation of labour needed to construct and maintain Dhaskalio. None of which suggests that ceramic sauceboats were less significant within the Keros-Syros society than marble vessels, as both could have been significant for different reasons and in different situations. Both materials, marble and ceramics, formed objects with the agency enabling individuals to participate in events that created and enhanced identity, and both were equally valued during and after their lives. Marble from their own places might have been the traditional significant material within Keros-Syros society, and imported festive events revolving around personal identity might have required their associated ceramic vessels. Two different human-material interactions, one originating within the culture, one from without.

Another, much rarer ceramic form in Keros-Syros culture was the ceramic 'Frying pan' (Fig.17). These plates were sometimes decorated, and very occasionally not, with an incised mix of symbolism including stylised waves, pubic triangles, astronomical symbols and oared longboats, the latter reminiscent of the LN longboat images at Strophilas (Marthari, 2017:157). They are found mostly as grave goods, normally positioned in visual eyeline of the deceased (Marthari, 2017:151). The symbolism and usage are debated, but we do know that Keros-Syros sculptors could produce similar large intricate bowls in marble (see fig:17), which would again suggest the usage of these platters either required ceramics, or did not require marble. The existence of a metal frying pan vessel in Central Anatolia (Coleman, quoted in Broodbank, 2000:270) implies that the Cycladic vessels were skeuomorphs, and therefore that the significance of the object laid in the form and function rather than the material. Additionally, the decoration is polished, and on the base when present, and Marisa Marthari (2017:156-7)

realistically notes this would degrade with utilitarian use. The paucity of these ceramic vessels could indicate some preservation bias were it not that shattered ceramic sauceboats fragments represent the most abundant items found at Kavos (see fig.32). Rarity, technical excellence and find contexts imply that whilst these plates held significance and agency, their absence from Kavos implies they did not link the individual to wider Keros-Syros community ritual and culture, and so although there may be other unknown and cogent reason for using ceramics, using marble might not even have been considered.

Twenty-five spools were found at Dhaskalio, items also found in varied domestic and funerary contexts across the Aegean during the EBA (detailed discussion in Renfrew, 500-501). Spools were also present, always fragmented, in the Kavos Special Deposits. The material choices found at Dhaskalio are interesting, Spondylus shells, white marble or pink veined (Koufonisi) marble, and two lead items, all imported to Dhaskalio and worked there (judging from the evidence of unfinished items), with the Koufonisi spools worked to visually emphasise the striations. Visual aesthetic appeal can also apply to utilitarian artefacts (Steel, 2023:4), and the spools from Dhaskalio also display pigment traces and wear patterns suggestive of a primary use as grinders and rubbers (balance weights have been suggested too). Fragmented deposition at Kavos could alternatively suggests ritual usage, possibly aniconic or apotropaic functions. It seems Dhaskalio artisans were working multiple materials into objects for multiple usages including personal adornment and identity, ritual or metallurgical uses related to trade and exchange (Capra *et al*, 2025:1). Perhaps there was no need to always use the purest white marble for *all* of these spools, as their use-lives did not always intrude into communal rituals of wider Keros-Syros culture. This varied use-life interpretation might also explain the varied materials used at Dhaskalio.

Whilst not found in Dhaskalio or Kavos, numerous seals have been excavated from the EBA II site of Skarkos on Ios, with smaller numbers from other sites (Marthari, 2018:185-193). Seal stamps are visible on hearths, pottery and pieces of clay. Seal designs are complex and varied, implying usage as ownership markers whether on a personal ceramic cooking vessel, a “monumental hearth” (Marthari, 2018:185) or to secure storage vessels or sacks for transport. Seals were made primarily of clay, with the finer terracotta seals made in the Skaros II period. A

few bone and lead seals have been excavated across the EBA Aegean (Marthari, 2018:186-193), but none in marble. The seals are well made, they needed to immediately project an image of ownership, but this was an individual statement of ownership, possibly with an added element of content labelling included in the design, by definition excluding any wider communal identity. Additionally, seals are small and with a constant, utilitarian use-life would probably have been easily and frequently lost. It would have always been quicker and easier to make another ceramic seal, particularly if you had a design template, than working stone. And as the significance here was the actual imprint not the seal, even the type of stone itself is irrelevant. Whilst well made and aesthetically pleasing (Fig:23), these seals were utilitarian objects referring to personal/family ownership as opposed to a wider Keros-Syros identity, so perhaps again marble was not culturally required.

At Dhaskalio the most numerous stone objects found were predominantly schist stone discs understood as lids for storage jars, as most food and drink for Dhaskalio would have needed to be imported. Find contexts suggest most discs remained, used as roofing weights or stands, or just being there as a source of shaped stone for the settlement (Boyd and Dixon, 2013:641-643). Whilst competently made, these discs have no decoration or symbolism, implying no ritual or symbolic meanings/function. Whilst most probably purely utilitarian, nonetheless unworked or partly worked material can have meanings and symbolism unreachable to us now without accompanying texts, and just the material choice of schist from specific locations (mostly Amorgos) could have held significance for Keros-Syros islanders, a point also made by Boyd and Dixon (2013:634). One sizable white marble disc was well rounded and highly polished on both sides, suggesting a deliberate choice and shaping of material to possibly cap a large storage jar holding a valuable offering. Either way, the Keros-Syros people were exacting in their choice and working of material.



Fig: 17. Ceramic "Frying Pan" from Chalandriani (ResearchGate, accessed online 20-1-2026)



Fig 18. Canonical Ceramic sauceboat from Chalandriani (British Museum Collections, accessed 20-1-202)



Fig. 19. Sauceboat with animal protome (Popa, 2016:3)



Fig. 20. Sheet gold sauceboat (Popa, 2016:8)



Fig: 21. Multiple-spouted sauceboat (Popa, 2016:8)



Fig: 22. Drinking from a Cycladic sauceboat (Popa, 2016: 151).



Fig: 23. Terracotta seals from Skarkos (Marthari, 2018:192)

Chapter 3. Marble Places

Dhaskalio

The settlement of Dhaskalio sits on a small, steep islet adjacent to Keros (figs. 27-30). Access in the EBA would have been by sea, using oared longboat or canoe, and during the EBA a slightly lower sea level exposed a narrow causeway to the main island providing safe mooring in what otherwise would have been a narrow, wind-swept channel (Fig. 26; Renfrew, 2007:40-45). Other than a small Byzantine chapel on the summit, the site has not been subsequently built over, and excavations shows the islet was completely covered with small, mostly single-roomed buildings, built onto massive, well planned and constructed terraces closely following the contours. The exception was the large summit hall fronted by a matching but unroofed courtyard. Access upwards to the courtyard and hall was via passageways following a rising semi-circular route traversing right from the islet entrance steps (Fig. 26). This was a planned, well-built settlement (discussions in Boyd, 2013:341-386) if a bit crowded by modern standards – Alexander Aston describes it as “warren of buildings” (2020:590), and the settlement at Skarkos was similarly crowded (Marthari, 2018:169-174; Fig.34).

Whilst the infill and lower facing of both the building and terrace wall are almost exclusively of local stone, masonry facings were predominantly constructed from white schistose marble slabs imported from Naxos, with the enormous amounts present on Dhaskalio (Boyd, 2013,372) being transported by sea. This material came primarily from Naxos (Tambakopoulos and Maniatis, 2017) as opposed to, for instance, the huge quantities of schist discs found throughout Dhaskalio which originated mostly from Amorgos (the much smaller quantity of marble discs coming from Naxos) . Michael Boyd estimates at least 69% of the walling was imported from Naxos, representing a huge communal undertaking, even more so considering that EBA community sizes were small, estimated as between 5 and 500 people per settlement (palaeo-demography discussion in Broodbank, 2000: 86-88). Suitable weather for seafaring was limited by the harsh climate, the meltemi, and critically the time and manpower required for agriculture/harvesting within these small settlements (Aston, 2019:26-27). If images on Cycladic saucepans and rock etchings are accurate, Cycladic longboats were purely oared vessels with a low beam, and so would have flooded easily in the stomach-churningly

rough seas (personal experience) characteristic of the meltemi even in the summer. This would also have precluded carrying large amounts of stone as ballast (Dixon, 2013:323), meaning bulk transport would have been small canoe. And marble was not the only significant material used to beautify the settlement either, as the archaeological record hints that fine hardwoods were extensively in construction (Renfrew *et al*, 2013:422-426).

Visuality is relevant to the centrality of Dhaskalio within the Inner Cyclades (see figs. 27-29), although Cyprian Broodbank believes other similar sites whilst not as central, were much better resourced, and other unknown reasons laid behind Dhaskalio's growth (Broodbank, 2000:241). Given its aridity and lack of cultivatable land on adjacent Keros (perspectives not changed by the Keros Island surveys- Archaeology in Greece Online, accessed 20-1-2026), choosing this site also implies a society committed to supporting and maintaining the settlement. Detailed interpretation of the evidence suggests that the site whilst large, did not support an equally large *permanent* population, but rather was a mix of limited domestic inhabitation with and a degree of craft/artisan workshop activity (Renfrew, 2018:501-544) that increased across time. Recent use-ware analyses (Capra, 2025:10-5) of macro-lithic tools from Dhaskalio details extensive metallurgical use on pliable metals such as copper, lead, gold and silver, all suggesting Dhaskalio may have been a "specialised centre for metallurgical production" (Capra, 2025:15).

Functions of the individual cells, dwellings and the summit hall are not clear from the evidence other than some copper tools (Fig: 9) recovered from the hall implying metallurgy (or simply storage?). There is little evidence of residential occupation, and other than the metallurgical traces above little evidence of the commercial entrepot of Cyprian Broodbank, with the finely decorated seals indicative of trade found in such quantity at Skarkos (Marthari, 2018:134-9) being completely absent at Dhaskalio (Renfrew, 2017:556). There is one burial, a cremated and de-fleshed individual interred directly behind the facade of a prominent walled terrace (Moutafi, 2013:451-62).

Construction of a deliberate route to the summit enclosed by impressive white marble facings suggests a processional walkway to the high point of the islet. Terminating at the

summit hall with restricted entrance via an enclosed courtyard, this implies a ritual processional way with the lustre of the marble facings focussing attention – all parts of Colin Renfrew’s checklist of archaeological indications of ritual (Renfrew, 2007:114-115). This interpretation is supported by a substantial deposit of small round white pebbles in one single room, again implying repeated ritual deposition. There is a depth of meaning in the pebble deposits, as the pebbles in the unstratified special deposit south at Kavos are from the foreshore at Kavos (Aston, 2019:600), whereas the Dhaskalio pebbles came beaches on Ano Kouphonisi and Kato Kouphonisi, perhaps indicating an ordered sequence of ritual depositions. Alexander Aston suggests the Kavos pebble deposits mark visits of remembrance, and interprets the pebbles at Dhaskalio as visible indicators of communal visits (Aston, 2019:599-601). A tempting but speculative interpretation is to see this as evidence of repeated ritual journeys from a home community to the Kouphonisia, then to Dhaskalio and Kavos, with each stop a ritual, an example of “organising energetic flows of persons and material into enduring patterns of interaction” (Aston, 2022: 35). John Chapman provides broader interpretations from Balkan case studies which note that changes, often intensification, in ritual deposition practices follow significant societal change/upheaval (Chapman, 2000:226-230), much as evidence suggests occurred in Dhaskalio Phase C from 2500 BC onwards (Broodbank, 2000:320-350). Together with the special deposits at Kavos, we can see evidence of the types of repeated ritual events Paul Connerton (1989:79-88) describes as so fundamental in creating social memory.

This leads us to the chronology of this linked site. The deposition events at Kavos peaked in phase A, preceding the expansion of Dhaskalio through Phases B and C (Renfrew, 2013: 705-706, 713-721). While depositions at Kavos declined, Dhaskalio appears to have developed and diversified, whether as a ritual center, prestige settlement, political center, or trading hub, or more probably a continuously changing combination of these. At Dhaskalio through phases B and C numbers of storage vessels increased as numbers of cooking vessels declined (Renfrew et al, 2013: 707-709), implying a transient population increasing across time, and in time both sites appear to have been gradually abandoned in phase C, with no evidence of abrupt destruction other than possible fire destruction of the summit hall (Renfrew *et al*, 2018:541) in phase C. As at Ayia Irini (Wilson, 2013:406) and Skarkos (Marthari, 2018:171-172)

there is little evidence of destruction (as at Aya Irini - Wilson, 2013:423), so it is possible that this would not have been the first abandoned building to suffer from a destructive fire. There is no defensive walling as at Kastri (see Fig:33) or at Skarkos (Marthari,2018:171-172), and in a culture that valued its materials, tools and artefacts it is quite possible that such personal possessions could have been gradually removed. This is in stark contrast to Skarkos, where large amounts of pottery, sculpture and seals were found, “sometimes just where they had been left when the settlement was abandoned” (Marthari, 2018:172). It is worth noting that Wilson (2103:423) attributes the abandonment of Skarkos to a destructive earthquake, but without any reference.

Dhaskalio demonstrates a large and prolonged communal investment into a sophisticated planned construction using specifically chosen, and culturally significant materials. Given the unique visibility of the location, it is hard not to see this interaction of human technology and material as a visual projection of communality into the surrounding environment. The white marble walling would have been immensely visible in the vast space of the surrounding environment (Fig.31), a spectacular projection of Keros-Syros culture across the Aegean.



Fig. 24: The Inner Cyclades within the Aegean Basin (ScienceDirect, accessed 22-1-2026)

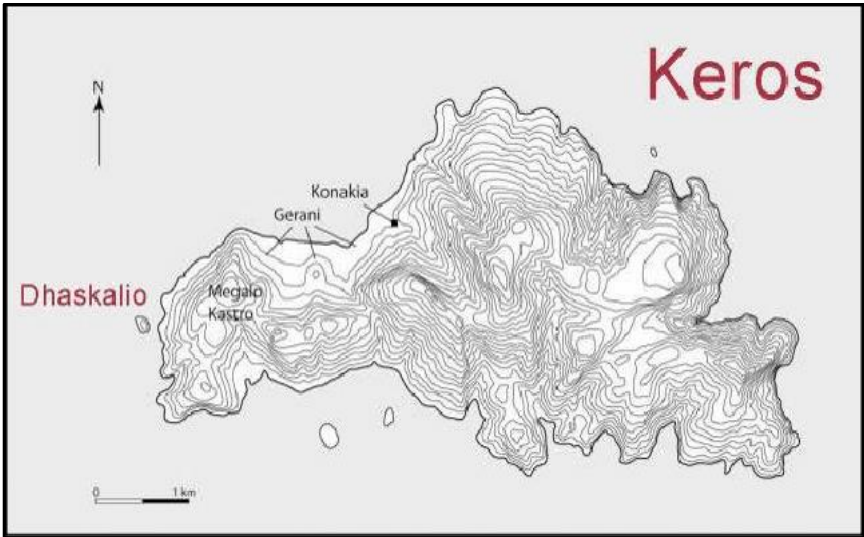


Fig. 25. Keros (Renfrew et al, 2013:8)

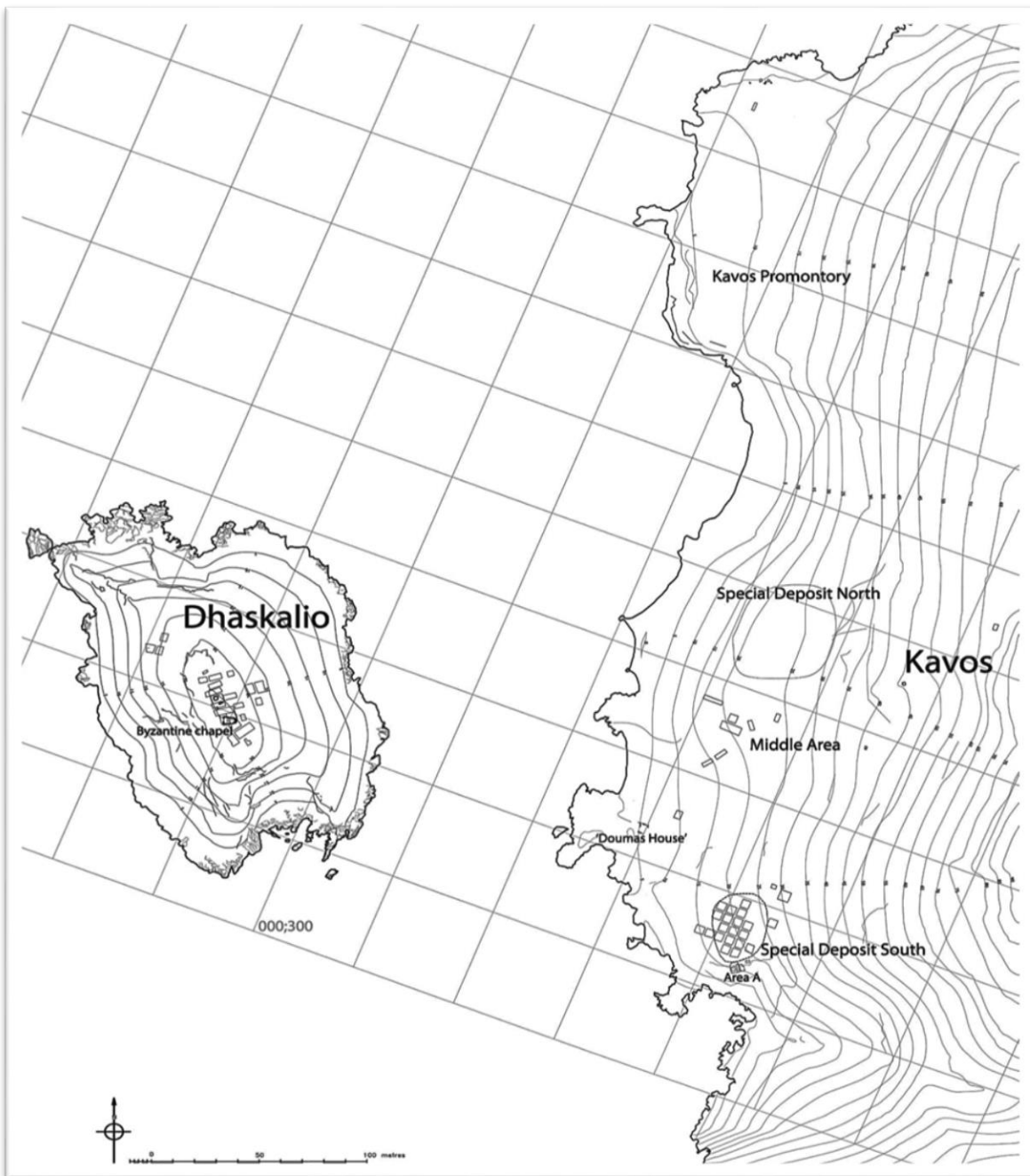


Fig. 26. Dhaskalio-Kavos (Renfrew et al, 2013:9)

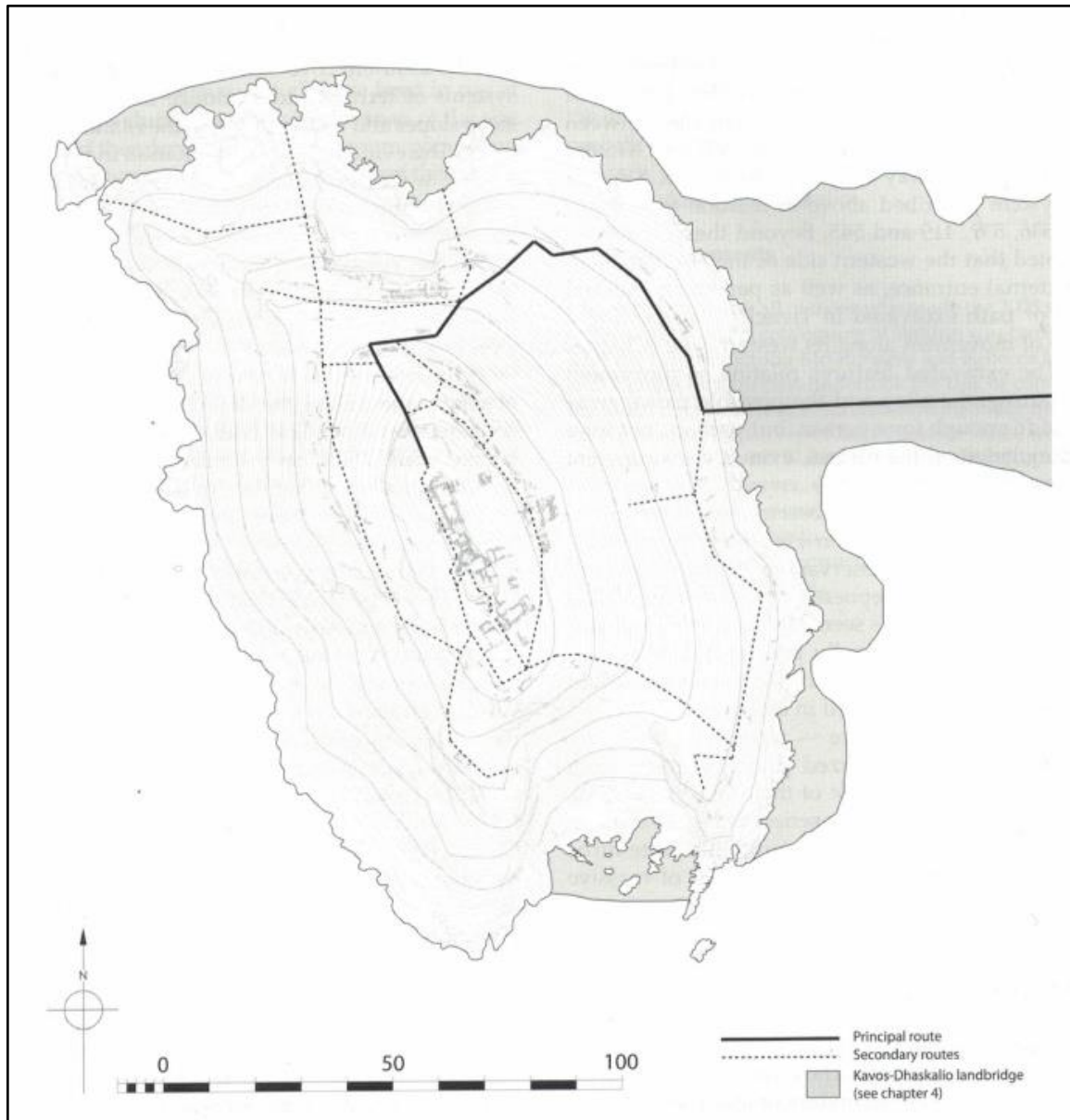


Fig. 27. Access to summit hall of Dhaskalio. Shaded area to the right of the island represents the probable shoreline that formed a causeway to Keros during the EBA (Renfrew et al, 2013:383)



Fig. 28. Dhaskalio-Kavos from the south (Renfrew, 2018:5).



Fig. 29: Dhaskalio-Kavos from the north (Renfrew, 2018:5).



Fig. 30. The Cyclades looking south from Naxos. Keros is in the middle distance with Dhaskalio (just) visible to the right (Students own image).



Fig. 31. The terrain of Dhaskalio (Cambridge University, accessed 19-1-2026)



Fig. 32: Reconstruction of Dhaskalio during Phases B & C (Pinterest search, accessed 20-1-2026)



Fig. 33: The defensive walling of EBA II Kastri (Museum of Cycladic Art, accessed 19-1-2026).



Fig: 34. The urban density of EBA II Skarkos (Marthari, 2018,)

Kavos

Occupying a discontinuous slightly curved sloping ledge on Keros directly opposite Dhaskalio, Kavos forms a “natural amphitheatre” (Renfrew, 2018:533) . Unlike at Dhaskalio there is no settlement other than the ‘Doumas’ house (Fig:25), and the site consists of two large separate areas of object deposition, the special deposits North and South, and the adjacent exposed and windy Kavos promontory (Fig:25). Activity at Kavos differs from Dhaskalio, with deposition peaking towards the end of phase A and declining during phases B and C when the settlement on Dhaskalio was expanding. However, this is a partial interpretation based on the undisturbed special deposit north, with the special deposit south having been destructively looted in the 1950s and 1960s.

The artefactual record also differs markedly between Dhaskalio and Kavos (Fig.32). Dhaskalio presents a mix of ritual, residence, storage, metallurgy and stone working, whereas the Special Deposits at Kavos contain heavily fragmented (Colin Renfrew prefers “smashed to smithereens” - 2007,418) objects of specific types and materials . Additionally, smelting is evident from scarf deposits on the exposed, windy Kavos promontory (Georgakopoulou, 2013:689). There are a few graves in Kavos Area A, but no human remains at all in the special deposit north. There are a large number of bone fragments from the special deposit south, but as the entire area was devastated by looting and consequent surface water run-off, these remains are effectively unprovenanced (Broodbank, 2000:228-229). There are minimal amounts of animal remains or charcoal (Renfrew, 2017:540-541) at Kavos, whereas at Dhaskalio there is evidence for cooking and food storage (Renfrew *et al*, 2013:708-709) suggesting that Dhaskalio must have hosted any cooking, feasting and drinking occurring as part of congregations or communal rituals (or extended visits?).

The special deposits on Kavos are significantly different from any other EBA site yet excavated. Ware-usage analyses have established that most deposited objects were fragmented prior to deposition (Renfrew, 2017:457-493). We cannot determine whether the fragmentation occurred prior to being brought to Kavos, or during ritual at Dhaskalio, or immediately prior to deposition at Kavos itself. Either way this was a very deliberate partial deposition at Kavos, with a deliberate partial retention elsewhere, either prior to transport to Dhaskalio-Kavos or after travel back, the whole process mirroring John Chapman’s

fragmentation and enchainment ideas (2000:23-48). For both objects and materials at the point of deposition this breakage and burial validates Paul Connerton's description (1989:87) of how the symbolic capital is invested in culturally significant objects, creates agency for individuals within their society, which is then permanently fixed in the communal memory via breakage and burial. From the evidence, and as outlined previously, we can assume the objects interred at Kavos were linked to a communal Keros-Syros identity, and their deposition would have been equally important within their communities.

What is also interesting in the special deposits is also what is not present – human remains, jewelry, tools, very few metals objects and no evidence of feasting and drinking, whether ritual or celebratory (other than the thousands of sauceboat fragments). No other comparable EBA deposits exist, and little evidence of similar deliberate fragmentation and deposition events within Keros-Syros funerary, domestic or ritual contexts (citation needed). Within the necropolis at Chalandriani for example (given the problems of disturbance) grave shapes and dimensions display evidence of social stratification and gender differentiation, but with very few graves actually containing any grave goods whatever (Hekman, 2003:77-86). Where found, objects are overwhelming personal possessions, for example obsidian blades together with the bone tubes (for holding mineral pigment for body modification), finely textured imported ceramics and sauceboats, some marble vessels, all notably with very little evident deliberate fragmentation (Hekman, 2003:77-86). If the personal identity of the deceased is represented by the treasured possessions accompanying them, then these Kero-Syros grave goods represent distinctly different material assemblages to those found at Kavos.

A possible explanation lies in Alexander Aston's proposal that Keros-Syros marble FAFs were cultural identifiers (Aston, 2019: 601-602), establishing the trust necessary between communities to conduct projects such as the construction of Dhaskalio, and the lengthy sea journeys necessary for trade and to secure food resources. These activities would have left the small, isolated Cycladic settlements denuded of manpower and very vulnerable (discussion summarised from Aston, 2019: 587-610) In this interpretation the Kavos deposits could be a memorial to the singular power of a marble-human interaction, where the iconic figurines possessed the agency to regulate behaviour within the society that created them. It also

explains why the Kavos deposits are devoid of other personal identifiers such as the jewellery so tuned to an individual aesthetic, as these were archives of the wider communal memory enshrined in the material objects that connected communities.

Unlike Dhaskalio, Kavos was not a place made of marble, where visual materiality impacted individual and group aesthetic through its sheer projection into the environment. Instead, Kavos was the archive of the culture as expressed through material recognised and respected throughout their society. Perhaps the creation of Kavos as a communal archive across generations forms the ‘sensorial assemblage’ of Yannis Hamilikas (2014: 410), with generation after generation of visitors across renewing links between themselves, memories and material, and noting their presence with items of specific symbolism and aesthetic value (Joyce and Pollard, 2010: 292–303). Kavos would not have existed without these fundamental human/marble interactions.

	Dhaskalio	Special Deposit South
Folded arm figurine fragments	0	498
Marble rolled-rim bowl fragments	0	426
Sauceboat sherds	39	5121
Kouphonisi lamp sherds	0	243
Spools	25	66
Schematic figurines of Dhaskalio sub-variety	9	26
Obsidian	1541	3452
Metal & metallurgical finds	134	10
Stone discs	617	47
Ground stone	291	14

Fig. 35. Quantitative analysis of objects recovered from Dhaskalio and Kavos (Renfrew, 2018:545)

Suspected origin	Phase A		Phase B		Phase C	
	% Min.	% Max.	% Min.	% Max.	% Min.	% Max.
Keros	0	18.2	0	20.7	0	23.5
Keros Triangle	26.7	85.6	36.2	84.5	34.3	76.2
Cyclades	9.8	53.3	10.8	42.6	18.8	42.0
Other	1.4	4.2	0.5	4.7	0.2	5.0

Fig. 36. Origin of Dhaskalio ceramics (Renfrew et al, 2013:481)

Space, Place and Distance

Dhaskalio and Kavos were linked but very different places, created by and inescapably linked with the marble drawn from their environment. Tracing the links between these places, the individuals who lived there, their culture and the marble of their environment is not straightforward.

One persistent theme in human identity/place relationships is a cultural tendency to view place and space as a duality. Mary Helms (1988, 237-8) suggests that societies often see what is known and not known in spatial terms, conceptualised as inside versus outside, home versus wilderness, which in wider culture can become good/evil, civilization/anarchy, us/them, as well illustrated by Janet Richards (1999:85) for Ancient Egypt. Peter Allen (1997:261-262) illustrates this while discussing landscape modification within the inner Peloponnese Mani during the Ottoman period, explaining the explicit way the landscape was shaped, deliberately but unconsciously, around settlements to create a cultural space/duality of enclosed/wild,

cultivated/desolate, and safe/unsafe. These small, notoriously feuding but interlinked communities lived and died in a spectacularly harsh and unfertile mountainous landscape, providing a compelling comparison with the EBA Cyclades. This creation of the community within a landscape – or island-scape – represents the habitus of Pierre Bourdieu, “structures constitutive of a particular type of environment” (1977:70), a place within the environment for individual and group identity. However, within the expanse of the Cyclades there is an interlinked and interdependent mosaic of spaces and places with no clear geographical dichotomy, and little obvious duality. Perhaps the Keros-Syros people instead saw their environment as the sum of their places and intervening spaces, creating a very different set of interlinked beliefs of their place within a larger, encompassing environment. As both the ritual and daily life of Keros-Syros communities was permeated with the marble they sourced from their environment, it would have become the thread linking their places across the spaces between them, as obliquely summarised by Alexander Aston (2019:603).

The very existence of Dhaskalio and Kavos a central place in Keros-Syros society would have attracted ritual events, congregation and ceremonial, exchange and trade, an example of Tim Ingold’s constantly changing task-scape (1993). John Chapman explains that (2000:203-204) by explicitly linking ritual and occupational activity within a place/space continuum to communal identity, “The continued occupation of a special place is contingent on negotiation/consensus” that creates a “place-based social power” (2000:203). Given the extensive evidence for ritual at Dhaskalio/Kavos, this also mirrors the observation of Evangelos Kyriakides () th that the initiation of rituals in a place can encourage their recurrence, attract other ritual observance, and in doing so create a ritual ‘center’.

That same powerful place paradigm supports Cyprian Broodbank’s descriptions of a trading settlement (with a very odd cemetery though, 2000: 258-262), in the metallurgy, the marble working, imported goods and the use of marble to enhance the visibility and prestige of the settlement. Whichever way you look at the settlement, it needed to be seen, everything and everybody came to it by sea, and visually Dhaskalio would have been a beacon, an attractor in the Cycladic islandscape.

Mary Helms (1988) discusses these issues through the lens of distance. Her wide-ranging anthropological discourse persuasively argues that distance begets exoticism and value, which for the voyager and recipient in turn enhances status (Helms, 1988:112). The greater the distance, the greater the difficulty (or danger) of acquisition, the greater the credit to the voyager, and therefore the greater the accrued status. Even just a perception of geographical space and distance can be exploited to create power and status (Helms, 1988: 51-53, 117-120). Helms also notes that trade and exchange establish points of contact, and accordingly places become defined within space, the unknown becomes the known (Helms, 1988:12). Edward Casey (1996:42-43) discusses this point, noting how porosity or absence of boundaries is a fundamental prerequisite for trade, which given the amorphous Cycladic environment is very applicable.

The spatial aspects of place and distance do not always necessarily equate to status and identity in all cultures though. In an increasingly confident culture participating in the trade and exchange networks of the Eastern Mediterranean, perhaps there was an identification with native materials – here marble – as the preferred expression of identity? John Chapman's case studies describe the tension between valued local materials and exotic imports as community negotiation (2000: 200-201, 210-211), and perhaps at Dhaskalio-Kavos importing exotic items for cross-cultural events did serve to highlight the opposite, fine objects made from familiar materials they knew and liked, drawn from their world, and resonating with their own cultural meanings. We know that knowledge of working a material creates familiarity, and together with the importance of marble within wider Keros-Syros society we can image this would enhance its importance when compared to more esoteric imports, perhaps designed for equally imported rituals? So fine imported Ufiris sauceboats might have felt nice in the hand and on the mouth, much as Carl Walsh outlined for Kerma ceramics (2019:175), but they were for use within the confines of specific ritual events. The Keros-Syros people might have felt that the finely worked, almost translucent marble vessels, spools and figurines were the only appropriate items for more significant memorials and rituals that dealt with the parts of their identities, memories and obligations rooted in family and Keros-Syros society. Theoretically, if possession of ideas and knowledge can mark status and develop exclusion, perhaps the same

principle applies to aspects of material culture, and the items and materials that that create and maintain a distinct identity within a society might by their very existence and agency exclude anything from outside.

Architecture

The geographer Yi-Fu Tuan looked duality of place and space. He specifically saw space becoming a place in terms of human impacts. So when an architectural form becomes an “environment for man” (1977:106) it has meaning and expresses social order (1977:112-113). Tuan also tells us how “where one lives is one's own intimate experience”, and thought deeply about time as dimension of perception, noting the pauses, how we see a place anew each time (Tuan, 1977:168-170). For Tuan, when we see it, it catches our attention, it enters our consciousness, intrinsically coupling memory, emotion, and place with visuality. For the Keros-Syros people, marble was all around in their environment, present in their everyday life in multiple ways, and to construct a substantial, highly visual settlement from this material resonant with symbolism and status might have seemed obvious. The marble would have created that link every time it entered their vision.

Alongside this pronounced visual impact, in modern societies marble symbolises antiquity, authority, and prestige. Architecture anywhere from the British Museum, to the Taj Mahal and to the Library of Congress in Washington, uses these facets of the materiality of marble. The same seamless interaction of material, design and symbolism is apparent in Keros-Syros figurines, and would be even more immediate in the imposing visuality of Dhaskalio. In both figurines and architecture the human/material interaction created an emergent agency through Zainab Bahrani's "clear sense of aestheticizing a work" (Bahrani, 2014: 9), because the marble held a visual impact alongside the object form.

The fine white or lightly banded marble slabs used to face the buildings, terraces and walling at Dhaskalio were overwhelmingly from Naxos, Michael Boyd estimating at least 67% (2013:372). Local Keros marble and small quantities of other local stone were used too (Dixon, 2013:309-324), but mostly for structural infilling and faced as best possible if particularly visible (Dixon, 2013:309-324). Chris Scarre (2013: 151-152) talks about the choice and manipulation of stone through the lens of monumentality, a different but very relevant viewpoint here given the immense visuality of the Dhaskalio settlement. He argues the use of specific stone in such contexts can often only be explained in terms of pre-existing significance or agency held by the material, and that unaltered material can be used even when the culture possessed the technology to modify the material (Scarre, 2013:150-151). This tells us the stone itself represented a way of thinking about the world deriving from memories prompted by the material. Chris Scarre is clarifying that this was more than just an architectural style, it was a visual projection of cultural memory (Scarre, 2013:150-151). Whilst the imported marble at Dhaskalio was worked as opposed to being unworked, it was probably selected and used for reasons mirroring Scarre's principle. Keros-Syros society existed in places and spaces where marble was all around them all the time, and a culture saturated with marble, which perhaps created a norm where marble was the only logical choice to enhance Dhaskalio? We are perhaps seeing that the communal effort driving the creation of this visual cultural statement simply required marble, its significance, its agency, and the emotional attachments it created with the Keros-Syros people.

An alternative is Cyprian Broodbank's interpretation of Dhaskalio as a trading/voyaging settlement, where the same visibility could be seen as enhancing its trading potential (Broodbank, 2000:260-268). Transporting the Naxian marble to Dhaskalio, planning the layout, shaping the stone, and the actual construction on a steep and resource-poor site, the investment of communal time and labour, all point to a conscious choice of site as well as material to enhance it. Location and visibility facilitate trade, and for the waterless Dhaskalio site a degree of trade and exchange was a necessity, so driving the use of marble to enhance visibility, perhaps initially irrespective of any culturally created material agency of the marble.

Whether from a pre-existing cultural significance or to support a trading culture the visibility of material and place would have drawn Keros-Syros society and individuals within it into a web of co-dependency. This is the same way as the elite of Lagash were locked into obtaining hard, lustrous diorite for their images (from translation in Edzard, 1997:35). Once this stone was established as the only acceptable material for such significant projections of symbolism, it locked the city into spiral of acquisition (twenty-seven statues of Gudea of Lagash are extant, all in diorite), this was the agency of the material. And at Dhaskalio the huge display of communal planning, effort and skill in building the settlement demonstrated the burgeoning material agency of Naxos marble within Keros-Syros culture. To the point where we could almost say that Keros-Syros society was running (or rowing) around after marble. The materiality and agency of marble was organising their world.

As noted above, Keros-Syros communities were small, averaging between 20 to 500 people, and the islanders buying into the construction of Dhaskalio would have been close to the decision making, planning and implementation. Their perception of the social pride, of status in the finished settlement, would have been so much more important because of their heavily invested emotional and physical capital. They were building a special place, arguably diving a need for the best workmanship to create the best vision of their culture, and the need for Dhaskalio to *look good*. So the chosen material for their iconic settlement mattered, the marble so important to individual identity and cultural memory, built into substantial terraces faced with masonry which seamlessly integrated into the natural contours of the islet. The cumulative visual impact of this settlement would have been apparent far across the Aegean,

particularly in extreme clarity of summer light at the height of the voyaging season. This would have been an image projected into the environment of a place linked to their culture and identity through the visuality of marble.

But how

Pallasmaa

Chapter 4. Interactions with Marble

Creating and Holding

Marble most intimately connected to Keros-Syros people through their physical-material interaction of working with it. Materials and objects derive agency from these interactions, and societies and cultures provide structure for the individual to learn these practical skills, as well as language, behaviours and conduct. To Pierre Bourdieu this range of processes involves specific instruction, the structural exercises involving objectivisation and repetitive familiarisation, alongside the more subtle acquisition of the “art of living” (a detailed discussion, 1977:88-89). The common thread is the acquisition of knowledge/skill, the creation of status and identity through learning, through *doing*. This is Bourdieu’s *habitas*, familiarisation and “practical knowledge of the social world” (Bourdieu, 1977:3-5). Paul

Connerton also sees learning, “habitual skilled remembering” (1989:72), as part of the bodily practices that contribute to group identity. What is difficult here is applying these intuitive, nuanced theoretical discourses to the people and artisans of the pre-literate Keros-Syros society. When we look at a statue of Gudea of Lagash in the Louvre or the British Museum, the sculptor can tell us who it represents, that it made to celebrate the construction of a temple to Ningirsu, and even the type of stone – diorite (Bahrani, 2014:101-102). This is the sculptor talking to us, but we have no such voices from Dhaskalio.

Douglas Bailey addresses this telling us that making and handling bodies in miniature generates particular set of emotional reactions related to well-being (Bailey, 2014:32). Also apparent is his appreciation of the millennia deep link between cognition and our hominin ability to manipulate material, in essence the satisfaction of gripping and holding, of touch, and this fundamentally changes how we see the world around us (Bailey, 2014:35-37). One sense enhances the other, and this relates directly to the feel of marble, how it was manipulated. It is the pleasure, the emotion, of seeing something you have made (see appendix 1). The Keros-Syros people lived with, touched, saw and manipulated the material, they knew it intimately.

“I am always thinking about designs, even when I am doing other things and, whenever I close my eyes I see designs in front of me” (Hopi indian potter, quoted in Castleden, 1987:22). This is an example of Maurice Godelier’s (1986:4) imposition of mental realities onto material matter, but to work material the artisan/artist must also know the material, its properties and surfaces, its tolerance of the environment and human impacts. As discussed, marble co-operates with sculptors, it is malleable, in its predominantly non-planal saccharoidal typology it resists splitting and shattering, assisting the delicate motor skills needed for sculpting (see fig.35 for example). Marble/human interaction is rewarding, as pointed out by Douglas Bailey above, creating agency and respect for the material and sculptor, but it is the stone itself that reacts to its environment, the inherent materiality of the marble. The experimental archaeology of Papadatos & Veneris, (2017:483-489) details the actual human/material interaction, the fine manipulation, practiced techniques, care, and the visual appeal of a finely polished figurine (see Figs.34-36). They also emphasise the repetitive nature of detailed sculpting, to the point of tedium at times. Working stone is rewarding, but also difficult, and

people need to take breaks. Colin Renfrew's remark that the Keros-Syros skill and craftsmanship "may not in any case be so very great" (Renfrew *et al*, 2007:439) is perhaps a bit too dismissive. This is big theoretical discussion, as Chantal Conneller puts it, within academic discourse form, or artefact, has been "privileged at the expense of material" (2011:25). This is the tension between the experience of the Hopi potter, his visualisation of form, and the theoretical process of picking apart (redressing?) the boundaries between human and material. A Cartesian duality where matter is formless and malleable, to be worked on. Conneller squares this circle by quoting Heidegger's commonsense observation (Conneller, 2011:39) that materials have inherent properties that "can suggest the use made of the material". To paraphrase, the materiality of the matter imposes limits on possible human interactions, it is knowing your material, the sort of familiarity the artisans of Keros-Syros society had with marble (also see appendix 1).

Alfred Gell proposed that technological excellence drives the appreciation of art, which gains value/appreciation from being "beautifully made, made beautiful" (Gell, 1998:43). However, aesthetic appeal encompasses other fundamental human/material interactions including tactile pleasure, inferred memories, cultural symbolism, material choices, and not least the enormous satisfaction of creating something pleasing. These sensory impressions create emotions in the creator, the observer and the culture. And how marble creates the emotions is where we turn now.



Fig. 37. Selected pebble, with FAF outlined (Papadatos & Veneris, 2017:485)



Fig. 37. Shaping and Polishing a FAF (Papadatos & Veneris, 2017:489)

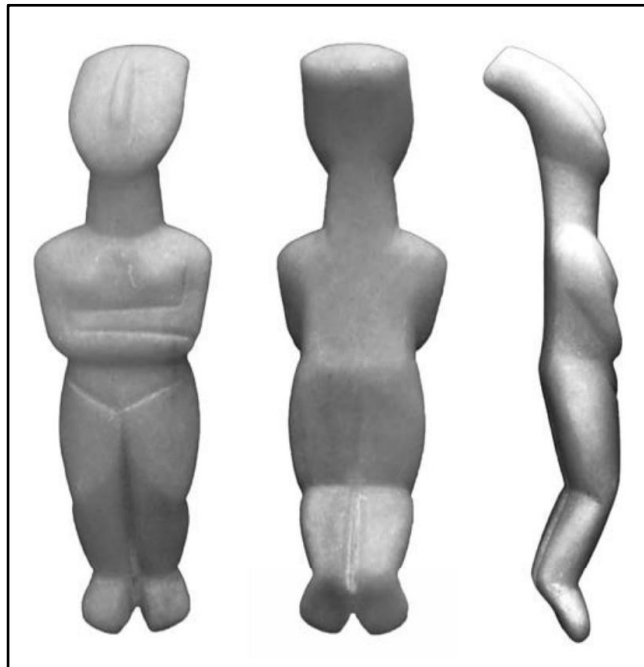


Fig. 39. Finished FAF (Papadatos & Veneris, 2017:484)

Visuality, Aesthetics and Emotions

Keros-Syros society constructed Dhaskalio and fine objects from marble. There were practical rationales of utilising the material to enhance a location, and the tactile pleasure of manipulating and handling stone. Marble was preferred for some luxury items, some rituals, some celebrations, and sometimes other materials. It was connected to Keros-Syros community identity in many ways. For what deeper reasons?

The visual appeal of a finely finished lustrous white marble figurine would have pleased the Keros-Syros people and the sculptor, they would have seen and inwardly acknowledged the skill and care of the work, and in that moment the figurine already held agency. The visual impact of Dhaskalio against the blue of the Aegean sky would also have been immense, as is still apparent throughout the Cyclades today, provoking a visceral reaction from the onlooker. These emotions enter the memories and resonate through people's lives. This is the power of visuality, why we seek meaning in images and objects, searching to understand their power. Images pass through our mind, compressing and solidifying unformed thought, and we are taken to place of enlarged awareness, enhancing our consciousness (Arnheim, 1954:44; Hirshfield, 1997:109). Visual perception mediates the thought process, organising the multiple perceptual strands of our consciousness.

Within vision, the surfaces of objects have meanings. The materiality of marble told a Keros-Syros islander of its origin, the reason for its selection, its journey into and through their community. An object created from marble could be seen and held, it resonated with the accomplishment of the sculptor, of technical excellence, the material creating both a mental image and spatial map of the culture. In Dhaskalio the visual impact of fine marble masonry would have resonated with communal achievement, the knowledge that their communities constructed a spectacular place to visit and gather together for generation after generation. For the Keros-Syros people this was unsaid, it was evident in what they *saw*. It was visuality, aesthetic appeal, the memories induced, the emotions created.

The anthropologist Alfred Gell disregarded the aesthetic impact of art to propose that technological excellence achieves drives the appreciation of art, which gains value from being “beautifully made, made beautiful” (Gell, 1998:43). However, aesthetic appeal encompasses

other fundamental human/material interactions including tactile pleasure, memories, cultural symbolism, material choices, and not least the sheer enjoyment of creating art, the performance. These sensory impressions carry meaning and the power to create emotions in the onlooker, the user, because the image, the object, the art is more than an display in a gallery or a museum (Sonik, 2021:532-533), it can represent a memory, an act of creation – the haptic pleasure of working stone discussed above, a performance and remembered enjoyment, an emotion.

Nichola Boivin argues that the landscapes and minerals of our world have profound sensory and psychological impacts (2004:20-21). These impacts can be further enhanced by physical interaction and/or transformation of the material, the grinding and polishing that a Keros-Syros sculptor could have undertaken to intensify and draw attention to the surface lustre of a bowl or figurine (Boivin, 2004:20), Alfred Gell's technology of enchantment in practice (1998:43). A figurine was created within the artistic vocabulary of Keros-Syros culture, a conscious expression of both sculptor and culture. Aesthetic appeal was the objective of the sculptor; balance, proportions, asymmetry, and not least the use of marble for its feel and visuality (definitions from Steel, 2023:5), and because this had been their tradition for generations. The symbolism of Keros-Syros marble figurines, the selection of marble for finely worked vessels, the Naxos marble finished for masonry, the careful selection of striated pink Koufonisi marble for spools, tell us of not only of excellent workmanship, but of the pleasure of viewing and using the objects. The marble masonry of Dhaskalio would have been planned and constructed to meet the requirements of that same Keros-Syros cultural milieu, but within that envelope it still needed to be 'good to look at' (Bloch, 2005:41). It could not have achieved its purpose any other way, for a visitor looking with culturally tuned aesthetics the marble masonry and imposing terracing would have *needed* to have been expertly made, the lustre of the marble would have needed to make you shade your eyes, it needed to prompt a visceral emotion, because the expectation of emotion of itself creates the desire for more (Gosden, 2004:39). And the onlooker needed to immediately understand that it was deliberately created to please. It could not just be seen, it needed to create the emotions that form lasting individual memories, the pleasure and smile, the quiet appreciation when you see fine

architecture, the feeling of inner satisfaction of *just knowing it was made to be so by your own people*. This was the real agency of marble itself, its visuality and the emotions it created.

Our physical interactions with the material world form and affect our perceptions of that world. Beyond the pleasure of handling a figurine, using a marble bowl or seeing Dhaskalio, the Keros-Syros people would have seen (and felt) visible traces of goal-directed movements; this was knowledge inherent within their culture and upbringing, an expectation. Individual perception of external visual stimuli can create an emotional response, and cognitive neuroscience identifies universal neural mechanisms, the activation the motor areas in an observer's brain, that underpin these reactions to embodied phenomena.

As well as highlighting our understanding of the neural basis of social cognition, the process that generate empathetic feelings/emotions, interactions, and learning, this also highlights the way that our emotional and physical bodily responses are triggered. The interesting point here is that this neural engagement can create empathy and emotion when experiencing an idea, memory, or seeing a represented action such as a symbolic or meaningful image or object (Funch,). This can be an actual physical feeling, the crying desolation when you realise why there is rose garden just outside Ravensbruck concentration camp, struggling to retain you tears when see the rebuilt interior of Notre Dame (both personal experiences). For Keros-Syros people taking in the visual impact of the marble of Dhaskalio might sometimes have gone beyond pleasure into these physically intense emotions.

Emotions as a concept though are difficult to define or conceptualise as they are a fundamentally personal experience (Funch, citation), with ambiguous boundaries even between subtle feelings such as aesthetics or moods, let alone more intense emotions like anger or fear. We know what we experience, but defining it is problematic. Bjarne Funch resolves this by looking at the universality of sensory appreciation, cognition and imagination, which derive from the context of our experience (Funch, citation). These distinctions matter, as people accrue emotional investment in their lives, part of this how we conceptualise the world, and how Keros-Syros people saw their world. The marble of their figurines and vessels would have resonated with memories, and these memories would have created emotions, and

if a figurine was broken it would be carefully repaired because it mattered, it was respected, valued, and might have represented so many memories. It was *theirs*. Zainab Bahrani describes the emotional effect created by aesthetic appreciation, of how objects and images can transcend time as “foci of rituals of history and collective memory”, whilst at the same time reminding the observer of that passage of time (Bharani, 2014:10). The power and agency of images, objects and chosen materials enhances our perception, appreciation and emotion, and Bahrani makes the case for distant cultures did not just always create images and objects as symbolic vehicles, but because they liked them (2014:35). This is power of visuality, the emotions they cause, and the memories those emotions create.

Value, or Desire?

This little ceramic hedgehog from Chalandriani (Fig: 40) immediately suggests that the artist/creator could achieve a strong aesthetic effect, almost *making* us like it. Our friend (Spike) is lovely, and the Keros-Syros people would probably thought likewise - they saw with the same eyes as us. This recognition is important, as it is all too easy to subconsciously think in terms of transactional values, to judge objects subjectively from their material composition. But there is no transactional value, this is an alternative emotion-based value (although value inevitably mediates desirability) and Spike is lovely and desirable, and personally I would love to possess him (true), so value does not always immediately enter the mental equation. Is this the same process in the fine objects created marble in Keros-Syros society? Were they desired for their aesthetic appeal, were they valued in that sense? Did the visuality of Dhaskalio please the Keros-Syros islanders, did they *want* to see Dhaskalio, did they *want* a figurine or a fine marble bowl. Did they place a value these abstract feelings and emotions in the same way as we might want to feel excited and emotional at the thought of visiting Sintra?

Susanna Harris suggests that “value is a judgment people make about things based on desire; this desire is for the thing itself and, importantly, for the effects those things engender”. Harris sees emotion-based value emerging from human/material relationships, and relative to the type and strength of the relationship engendered from the material interaction (Harris, :682). This is quite removed from modern discourse where value and therefore desirability can be seen as emergent from transactional contexts. This paradigm is often projected back in time, as with Colin Renfrew’s “Nexus of Fungibility and Value” for weighted metals as applied to the ancient world (Renfrew 2012). Whilst this obviously over-simplifies Colin Renfrew’s analysis, his theory of value implicitly focuses on transactional values by segregating objects into categories (jewellery, houses, ceramics, coins, textiles etc...) that follow modern transactional value judgements, and in doing so organises ancient societies material choices by those same value judgements.

When considered against the emotional and aesthetic appeal of their marble figurines, the visual impact of Dhaskalio, the communal memories archived in Kavos, the idea that the

human-material interactions of Keros-Syros society held discrete market-orientated values, or even remotely mirrored them, seems irrelevant. It is probable the people of this culture liked and desired their marble objects from the evidence of their choices.



Fig. 40. Small ceramic hedgehog from Chalandriani (Collection of Cycladic Antiquities, accessed 21-1-2026)

Ritual

A brief overview can highlight aspects of where ritual sits within culture, but actually identifying the material traces of ritual, whether secular, religious or cult, within the archaeological record is difficult without explanatory texts. Rituals include transient events, oral and visual ceremonies, Nicole Boivins 'mineral journeys', pilgrimages and processions. These leave little physical trace beyond ambiguous physical phenomena such as non-residential buildings, attention focusing devices, processional routing, and object assemblages. Evangelos Kyriakidis (2007:16-18) relates the difficulty of distinguishing between mundane and the sacred, ritual and ceremonial in the archaeological record, let alone between multiple rituals and ceremonies in a location. In the complexity and ambiguity of Dhaskalio-Kavos, and lacking textual corroboration, there may be multiple locations with multiple potentially ritual activities. Paul Connerton (1989: 102) helps here, explaining that irrespective of the purpose, repeated culturally significant and inclusive events, "culturally specific bodily practices", can combine in a non-textual way to cement social memory, all applicable to Dhaskalio-Kavos. Actions and rituals in the Cycladic environment would have been highly visible social performances, individuals would be seen to participate, drawing status and identity from their actions. The central hall of Dhaskalio could have been a place for ritual congregation, as would the whole settlement wrapped in its visually imposing marble masonry. The openness of Kavos was another ritual space, holding the places where the marble so critical to the rhythm of their culture, individual identity and memory permanently rested. These were place to be visited. We can start to imagine Dhaskalio-Kavos as the symbolic attractor of Colin Renfrew, his "first maritime sanctuary" (2017:549).

Depositions at Kavos involved marble vessels and sculptures, imported ceramics, obsidian and other significant objects. The figurines in particular had agency, had their own life within Keros-Syros society where their faces and bodies were painted (Fig:12) to reflect the body modifications of their surrounding society because their appearance mattered – they were as much part of society as their human creators and users. At Kavos the parts of the fragmented objects were deposited, and the separated fragments presumably interred in or

near their home communities, and parts at Kavos. We cannot know if the fragmentation was a ritual or cult event or part of a feasting or gift exchange, we do not know when or where these events occurred, or what meanings the Keros-Syros people saw within the rituals. What emerges from the artefactual record is that within the Kavos Special Deposit North objects with almost fresh breakage were often juxtaposed with objects showing severe weathering, which given the undisturbed stratigraphy of the find context imply that weathering pre-dated not only deposition but the actual breakage (Renfrew et al, 2013:12). So these objects obviously resided within human communities for significant time. This cycle of use-life/fragmentation was followed for marble figurines, spools, vessels, ceramics and the ceramic sauceboats which would have been so prominent in feasting and drinking events. Whether held the breaking – end the life – of fine valued possessions would be a significant act, perhaps associated with reciprocity, obligation, and the kinshipping dynamic as suggested by Alexander Aston (2020,604-605). This all echoes the Balkan case studies of John Chapman, who saw fragmentation, partial deposition and partial retention as key rituals within Bronze Age societies in the Balkans (Chapman, 2000:226-228), a linking of human and material in the “re-enforcement of social relations”. And rituals would stay in the memory, attracting more rituals to the central place of the Keros-Syros world. As Evangelos Kyriakidis says, the very existence of rituals in a place “crystallises the ritual location” (2007:15-17) further solidifying participants memories.

Not all objects were broken within this society, complete marble and pottery objects were the norm interred in graves. Cyprian Broodbank notes the increasing number of ‘rich’ burials in the EBA II, as well the a greatly increased number and types of items interred. A few unbroken items were present at Kavos, the most notable a very large figurine found isolated from the special deposit south (fig.13) . And as discussed above there were few human remains on Kavos, special deposits appearing instead to be a communal repository for the powerful objects holding agency within the wider Keros-Syros society, quite distinct from the objects important in peoples personal lives. The Special Deposits were full of objects linked to communal rituals and events involving the renewal of group and family ties, obligations, kinshipping or communal gifting or exchanges. These were fragmented and buried, removing

them from the world to an archive that could re-visited for generations. Marble represented the Keros-Syros world, the link between person, society and environment, and this sequence of enchainment would have added to the agency of the objects. Yet why within these communal archives were such substantial numbers of ceramics present? The answer probably lies in the origins of the ritual. Imported exotic rituals and events required exotic imported ceramic objects, not the locally made copies which were often poorer quality and did not possess the same exotic status (Helms, 1988:154-155). In contrast, for congregational ritual events connected with traditions of Keros-Syros society only items made from their own material world, marble, might have been acceptable. This mirrors John Chapman's nuanced "points of contrast" between the exotic imports acquired through inter-regional trade networks, and the influence wielded on socially significant individuals of locally created ritual objects (Chapman, 2000:210). Also relevant is Chapman's recognition of the significance of "the cumulative effect of the biographies of so many valued objects" (Chapman, 2000:210-211). This helps us imagine how the rich social identities of Keros-Syros culture developed through generations of group rituals, interactions with marble, and also how their lives were enriched by the "knots of hospitality" (Sherratt, 1997:399) formed through the communal feasting and drinking ceremonies increasing prevalent in the EBA (Broodbank, 2000:318) mediated by their exotic pottery vessels. These were all community events, and the objects they needed to use were all broken and held at Kavos.

Chapter 5. Questions

People of Marble, or People and Marble?

Throughout his sprawling Nobel prize winning narratives Miguel Ángel Asturias describes the indigenous Maya of Guatemala as *Mais Hombres*, People of Maize (1988). Native lowland Maya life and culture is fictionalised through ethnographic studies and insights provided by the few surviving pre-conquest Mayan texts. Maya lives are portrayed as so pervasively intertwined with their maize that the Maya regard themselves quite literally as made of maize and existing to serve maize throughout their lives, a society of complete human/material entanglement. Did Keros-Syros society view itself the same way? Did the people see themselves as part of a culture of marble, did they believe their identity and existence were completely linked to their material environment, or was marble just an available resource?

There are interesting parallels between Keros-Syros society and the pre-industrial, pre-literate Inka. Inka culture and religion revered their extreme Andean environment to the extent of treating and sometime physically modifying stone into cult places, “*Huacas*” (Van de Guchte, 1999:155). Even individual stones could hold power and agency, sometimes simply for their shape, sometimes for their origin and ethnic identity (Van de Guchte, 1999:152-154). In modern day Peru ritual still pervades the landscape, with potency in every stone, field boundary and house (Hastorf, 2007:78). The Inka seamlessly blended their masonry into the natural contours, an interaction of human, material and landscape agency to incorporate their places with their environment. We can see this within Keros-Syros culture, as carefully split and faced white marble was chosen for spectacular masonry at Dhaskalio, and skilfully blended into material bedrock. Unlike the Inka though, it is unclear if within Keros-Syros society this strategy represents a ‘state’ ideology (Van de Guchte, 1999:153). Like Keros-Syros culture they were exacting in their choice of materials, which the Inka indelibly tied to a physical place *as they were their environment*, the same physical and conceptual incorporation into the environment

as seen today in Q'eqchi' people of Guatemala, "The hills were human, now they express their feelings" (quoted in Gonzalo, 1999:262). Whether Keros-Syros culture saw their environment with the same degree of alterity is a question we cannot answer, but the evidence tells us marble was selected to expand the visual presence of Dhaskalio, as well as for ritual and events, the materiality and agency of marble is clearly visible behind these material choices. Keros-Syros people worked marble well, they had an affinity for the material, and the objects and places they created had effective agency over the social interactions, and the memories and ties created. They saw and appreciated the aesthetic appeal of marble in the sculpted objects and the architecture of Dhaskalio, the marble had this effect on them. These material entanglements are all visible within the archaeological record, but much more difficult to discern is to what degree Keros-Syros people regarded marble as *their* material, how intrinsic it was to their personal identities, to what extent they felt they depended on marble.

Andy Jones (2004:173) suggests matter and memory mediate the agency of objects as externalised vehicles for remembrance, and the marble of Keros-Syros artefacts and Dhaskalio architecture can be considered as mnemonic vehicles. But is the materiality of marble mediating the agency of the object, or does the artefact itself create memory, does its own agency and life history eclipse the origin and symbolism of the material? Marble figurines and vessels were repeatedly worked by hand, with marble and emery handled for weeks at a time, an enormous input of emotional and physical capital. The planning, sourcing, quarrying, transport, and construction of the magnificent marble masonry of Dhaskalio represented an enormous exercise of social *communitas*. Keros-Syros communities preferred to use marble from Naxos, but was this the ritual journey of Nicola Boivin (2004:10), or simple routine? The archaeological record suggests marble was worked in workshops as at Skarkos (Marthari, 2018:176) and in central places like Dhaskalio. Were artisans known and valued within Keros-Syros Society, did the agency of the marble and object they co-created enhance a sculptors status? Were the workers and stonemasons who built Dhaskalio honoured within their communities? Were there whole generations of identity built up that revolved around marble? We cannot pick apart these processes and emotions from the archaeological record, but we do know that human/material interactions have the potential to create real feelings, emotions and memories

in the maker, whose skill has knowingly enhanced the agency of both material and artefact. Keros-Syros people would have worked *with* the material, and the artefacts and architecture they created would have not only represented a significant investment of physical and mental capital, but created human/material vehicles with the agency to regulate their society and be aesthetically pleasing.

Keros-Syros society did not just like marble though. Mailinta Tsampiri notes (2018:37) that across the entire LN, FN and EBA around 60-70% of all excavated tools were of Melian Obsidian, which together with the well-documented EBA trade in finely shaped obsidian blades for scarification (Carter, 1999) suggests both an affinity with obsidian and a cultural identity formed around its usage. Tsampiri (2018:28) also notes this usage of obsidian did not decline until the EIA. Fragmented sauceboats form the majority of objects excavated, and were exclusive ceramic, whether imported or locally made. Fine Ufiris ceramics were imported from the Argolid (), whose form and fine finish combined to create very sensual objects. Marble was not the only material the Keros-Syros culture was entangled with.

Karl Walsh (2019:175) sees the genre of possession dominating individual cognition so pervasively that object and material agency *force* indelible changes in individual identity. Within the Keros-Syros culture it is probable both marble and artefact were “tied to a person’s conceptions of bodily self and identity” (Walsh, 2019:175). Marble figurines or architecture would not exist with their integral agency without the materiality of the marble. The marble creations of this culture drew this agency from their origin, human interactions, and use life within society. Keros-Syros society functioned around marble, it controlled the rhythm of the society and identity of its people, and they created beautiful, powerful objects and places from the marble of the world around them.

Complexity and Necessity

Whilst an obvious oversimplification interpretation of the Keros-Syros culture, particularly the Dhaskalio settlement, can follow narrow paths becoming a reductive, mostly binary choice between the central place of Cyprian Broodbank or as a ritual center/'maritime sanctuary' of Colin Renfrew. This tendency for EBA historians to fall into one camp or the other follows the pervasive Cartesian paradigm to treat questions, objects or *absolutely anything* into separate discrete categories. This approach has its strengths and is not wrong as such, merely not always appropriate for situations or questions where it is not possible to treat things in isolation, where examination of one facet of an issue is not sufficient for the understanding that can only be gained from a wider, holistic view.

Avoiding a simplistic, binary approach resolves contradictions. Cyprian Broodbank's islandscape concept (2000:21) describes how a society adapted to its surrounding environment via a PPA focusing on a matrix of singular viewpoints. However, as discussed above, Keros-Syros islanders lived their lives on and around the sea as settlements could not exist without trade and exchange. It follows that there was never one single optical viewpoint for each settlement because every single islander in a boat was a moving, changing viewpoint within an equally changing environment. And if the PPA is based on statistical probabilities, to what degree should actual experience affect the analysis? Do these contradictions undermine any interpretations based on PPA, or are these equally valid explanations of a reality where at the same time some people are on land, some are on the sea, and some are asleep?

Complexity theory (as outlined in Cilliers, 1998) demonstrates that complex systems *can only be viable* if multiple different experiential pathways can function simultaneously. Initially based on emergent information technology theory, the tenets apply to any complex (as opposed to complicated) system, and societies are archetypal complex systems. They resist explanation by reductive, partial analyses, and can only be understood by looking at

interactions of the system, society, with its surrounding environment, physical, conceptual, virtual (Cilliers, 1998:112-140). This often represents commonsense recognition of reality, as Douglas Bailey demonstrates in a debate over the cultural meanings of neolithic figurines: “It is more honest to recognise that any individual Neolithic figurine would have had several different functions and meanings each of which would have changed during the artefact’s lifetime” (2014:2). Or from late classical Egypt where the Coptic monastery of Panopolis (modern Sohag) could simultaneously be a religious center and a land-owning secular commercial hub (Lopez, 2013:102-126) and its principal, Apa Shenoute simultaneously be extraordinarily devout and disturbingly violent, dedicated to eradicating poverty and illiteracy, and an unpleasant self-serving misogynist (Lopez, 2013:116). In the shifting, complex society of late classical Egypt people and institutions accommodated (sometimes unwillingly) changing cultural norms, because they needed to, their society was adapting and evolving. In the same way Dhaskalio-Kavos could never have been *just* a trading and technology hub, or a ritual center, when in fact *it had to manifest all of them within that time and place*. Mircea Eliade’s interesting description of artisans in pre-literate societies as ‘connoisseurs of occult tradition’ (quoted in Mary Helms, 1988:115-116) helps us bridge the conceptual gap separating maritime sanctuary and trading hub, and then the reality of significant communal rituals being held at both sites as residents and visitors needed to import food and water and other everyday necessities, whilst artisans manipulated and traded stone and metal tells us Dhaskalio would have been a multi-faceted, continually changing community *from sheer necessity*.

Perhaps Alexander Aston (2019:603) recognises this best when he states “Keros formed the hub of an extended cognitive system which emerged through the metaplastic synergy of marble, seafaring, kinship and gifting, transforming social relationships across the Aegean”. Reductive explanations of complexity do not reflect reality.

“A Shining City on a Hill”

Based on a passage from the sermon on the mount: “You are the light of the world. A city on a hill cannot be hidden.” (Book of Matthew, 5:14), this phrase is often used in modern political discourse, the title quote coming from speech in 1980 by Ronald Reagan (The American Presidency Project, accessed 21-1-2026). Originally re-purposed in 1630, the Puritan John Winthrop was encouraging fellow colonists bound for the new world to create a place that could be looked up to both physically and metaphorically, “As a city upon a hill, the eyes of all people are upon us” (Squiers, 2018:62-63). In modern western culture this ideal of a shining city on a hill resonates with perceptions of aspiration, power and status as represented in place and architecture, with Christian symbolism providing an understated but immediately understood authority.

Did Keros-Syros people aspire to create and look up to Dhaskalio as John Winthrop thought his colonists should do in their new world? Was the shining white marble architecture a visible manifestation of their culture, their place, their achievement in their environment? Probably yes, as this immense visuality existed by their deliberate choice and material expertise, their material entanglement with marble. And were the fine marble objects they so appreciated, that permeated their society and rituals more than just objects or heirlooms? Again, probably yes as their marble objects had immense meanings, were inseparable from their ritual life, and held generations of accumulated memories and memories. This was not a vital material in Eloise Goviers sense of physical ingestion (2016:26-27), but like cinnabar it possessed the agency to entangle individual consciousness through visuality, encoded meanings and memories, emotion, the interactions of handling and making, ritual and accumulation.

Seeing Dhaskalio as opposed to viewing it in Karen Sonik's (2021:532) sense, as this would not have dis-interested viewing, would have resonated with memory and symbolism for Keros-Syros people. Dhaskalio and Kavos could be visited, experienced, seen and touched. The Keros-Syros islanders knew marble intimately, they understood how to use it, they read the messages it conveyed, it was an inescapable part of their life, and from the evidence we can argue they liked marble as well, its workability, the way they chose it for their ritual objects and to mark their identity. But did the cultural focus and material entanglement – the significance and agency – reside in the material or object? Arguably both, as we can see the objects they made, the delicate marble vessels, the ritual bowls, the figurines that possessed such agency, were both object and material intertwined, a co-creation of human and material agency. Culturally significant objects were created from culturally significant material, and accrued such agency within their culture that both object and marble were as fundamental to the functioning of the Keros-Syros world as the human artisan that created them. This the same entanglement of material agency and human creation is present in the immense visual impact of Dhaskalio, created from marble projecting into visual arena of the Aegean, the Keros-Syros people were looking up at *their* shining city on *their* hill.

And that image of Dhaskalio should remain in our imagination, as it probably was in the minds of the Keros-Syros islanders as they shielded their eyes from the sun glinting off the marble of Dhaskalio from across the sea. On the journey stopping to select pebbles on the Koufonisia would have been a meaningful pause before walking up the terraces of Dhaskalio to the summit. Did they engage with the place, feel and brush the marble like the generations of Egyptian worshippers at the Ptah temple in Karnak, waring deep 'pilgrim grooves' in the temple walls across centuries (Troche, 2023: abstract). Dhaskalio was made by them, it was a living monument to the *communitas* of their society, made from the marble they knew and worked. Each visit to Dhaskalio and Kavos could have been marked by offering carefully chosen pebbles, a visible addition to generation after generation of collective memory. This all revolved around the marble visuality of Dhaskalio, the marble memories enshrined at Kavos, a world that, to paraphrase Eloise Govier (2016:33), they would have co-created with that same marble. This

was their shining city on a hill, sitting in the enormous visual panorama of the Aegean. If this is how the Keros-Syros people ‘saw’ Dhaskalio-Kavos it would be a feast for the senses.

Ultimately though, were they people of marble? Or was marble just one material amongst many they chose, liked and used?

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