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## Chapter 1

# Haute Couture in the Bronze Age: A History of Minoan Female Costumes from Thera

*Marie-Louise B. Nosch*

*In this chapter, the author presents some of the female costumes from Minoan Santorini and uses recent scholarly contributions as the basis of her discussion on the Bronze Age technology available for the manufacture of these costumes. She views the use and representation of these costumes today as stemming from political and cultural agendas.*

*Keywords:* Minoan, Thera, frescoes, colours, design, historiography.

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King Minos was a legendary king at Knossos in Crete. He was married to Queen Pasiphae and had a daughter, Ariadne. According to legend, Minos demanded an annual tribute of seven young men and seven young women from Athens. The young people were sacrificed to his son, the monster Minotaur, half man and half bull, who was kept in a labyrinth. The Athenian prince, Theseus, son of King Aegeus, sailed off on a dangerous mission to Crete: to kill the Minotaur and free Athens from the demand for human tribute. His ship had black sails but he promised his father to raise white sails on his return voyage if his mission was successful. On his arrival in Crete, Ariadne fell in love with Theseus. She gave him a ball of thread to follow through the labyrinth. With this thread, he managed to find his way through the labyrinth, kill the Minotaur, and return safely out of the labyrinth again. Joyful over his success, he immediately travelled back but forgot to change his sails. Aegeus, holding watch for his son's ships from a rock high above the ocean, saw the black sails and out of despair over his son's presumed death, threw himself into the sea.

This classical legend contains two references to textiles: Ariadne's thread and the coloured sails. Let us now follow Ariadne's thread into the world of Minoan textile and costume.

The Minoan culture is named after King Minos. The Minoan civilisation is attested in the Bronze Age in present day Greece and Turkey. One of the centres of Minoan culture was the small island of Thera, today Santorini, in the southern part of the Cycladies in Greece (see Map 1). The island was destroyed in the Bronze Age by a volcanic eruption which blew a major part of the island away.

When did this destruction occur? Specialists agree that it was some time between 1700 and 1500 BC, that is, 3700–3500 years ago. Some scholars, based on the study of ceramic style, date the destruction to 1500 BC; others believe in the dates 1620–1520 or 1700–1610 BC, based on the scientific analyses of changes in the carbon isotopes in finds from the excavation; pieces of wood have been used for dendro-chronology and have yielded the dates 1628–1626 BC; ash layers from the volcanic eruption found in ice-core drillings on Greenland have been dated to 1645 BC. And, recently, analysis of carbon isotopes from a tree trapped in the ash layer has given a destruction date of 1627–1600 (Friedrich *et al.* 2006).

The discussion on the destruction date will probably continue. However, for the purposes of this chapter, it is important to note that the destruction of Thera created a freeze-frame in which Minoan life and material culture was preserved. Thus, the destruction gives us a kind of snap-shot of the life of the last inhabitants.

The island of Thera literally exploded when the volcano erupted. In the remaining part of the island, excavations have been carried out, revealing a Bronze Age town. Similar to Roman Pompeii, the excavators dug into private houses and discovered preserved furniture, cooking ware and amazing frescoes on the walls.

The frescoes show men, women and children in elaborate costumes. Here we will focus on the Minoan frescoes representing women and their costumes. Two excellent examples are the ‘Female Figure’ (Fig. 1.1) and the ‘Saffron gatherers’ (Fig. 1.2).

How far is it plausible to believe that the costumes on the Theran frescoes represent real costumes and are not pure fantasy? Elizabeth Barber, the specialist on Aegean textile and costume, believes that the elaborate and “festive” female dresses seen on the monuments were probably a development of daily wear (Barber 1991, 315). In the following discussion, I will outline the technological possibilities in Minoan society for producing such garments.

## FEMALE COSTUMES

The female Minoan costume seems to be composed of a tight bodice, sometimes open-fronted and with short sleeves. The bodice is decorated on the edges, either with bands or in-woven decorative motifs. The skirt can be bell-shaped or flounced, and is often decorated with either woven stripes or bands. Figures 1.1 and 1.2 show women and girls wearing sleeved bodices with decorative bands on the shoulders. Tassels hang from the sleeve edges or around the waist. The girls wear what look like wrap-around skirts richly decorated with bands. All the depicted costumes display a wealth of colours and an extended use of bands as decorative elements. Elizabeth Barber writes:

On the whole, the Theran textiles all look readily – even easily – weavable. To imitate most of these designs, the techniques of choice would be supplemental-warp float for the bands and supplemental weft for the larger cloths, possibly in double-faced or even double-cloth techniques (Barber 1991, 317).



*Fig. 1.1: Female figure from the House of the Ladies, Room 1. (The Greek Archaeological Society at Athens, Excavation of Akrotiri, Thera)*





*Fig 1.2: Saffron gatherers from Xeste 3, Room 3a. (The Greek Archaeological Society at Athens, Excavation of Akrotiri, Thera)*

Pictures of Minoan dresses are found on frescoes, seals and statues, and the evidence is scattered all over the Aegean area throughout the 2nd millennium BC. Attempts have been made to see specific developments over time and space, regional differences or ethnic markers. Nevertheless, the relative scarcity of evidence, and the wide time span, makes it difficult to trace such patterns. I would agree with Edith Trnka's assessment of the situation:

Rather than an indicator of ethnicity, differences in design may refer more to the age, status and activity of the wearer. Distinctions like textile patterns, colours and band decorations within the fabrics might indicate the social rank of the wearer (Trnka 2007, 121).

Several attempts have been made through the years to reconstruct the Minoan costumes. In the 1920s, the Lyceum Club of Greek Women made reconstructions of Minoan costumes. The work was done under the guidance of Anna Apostolidou, then Curator of the Museum of Decorative Arts (the present day Museum of Greek Folk Art). The costumes were used for festive events at the Panathenian Stadium in 1927 (Fig. 1.3). About 80 years later, Abby Lillethun made several reconstructions of the bodice of the young saffron gatherer on the Thera fresco and tested how reconstructions fitted the model and matched the frescoes. According to her, the closest match to the images came in the cut-in-one bodice with straight sleeves made of linen, because it fitted closely to the neck of the model; it was comfortable and the fit was smooth and tight (Lillethun 2003). These time-consuming reconstruction tests – among others – are a valuable source when investigating Aegean costume traditions and techniques.

## COLOURS AND DYES

The use of colours – blue, yellow and red – springs to the eye when admiring the Minoan female costumes. People of the Bronze Age could obtain variegated shades or patterns with the naturally pigmented black, brown or white wool. However, in the Bronze Age, it is likely that through selective breeding people could increase the production of white wool and this gave great opportunities for an amazing explosion of colours in dress. Textiles were dyed with plant and animal dyes. The colour purple could be obtained from murex mollusc. These are found in the Mediterranean Sea and are edible. When archaeologists find heaps of murex shells, it may thus indicate that the snails were consumed or used to obtain dyestuff. The murex mollusc yields a strong and colourfast dye, varying from red to purple and blue. Extraction of purple from murex was known early in the 2nd millennium BC in Crete (Burke 1999). Murex-dyed garments are also known from later ancient literature: the Roman emperor alone was allowed to wear a purple garment while his senators could only carry purple-dyed bands on their toga. Purple dye from murex has always been considered a costly and luxurious substance, even more so than gold.

In some works on ancient colours and dyes, it is assumed that enormous amounts of murex were required to dye one piece of cloth. This however, is based on a misunderstanding of the dyeing technicalities. In the 19th century AD, the growing chemical industry aimed at supplanting plant and animal dyes with chemical dyes by determining the composition of murex dye and by isolating the pure dye substances. The chemist Paul Friedländer isolated 1.4 g of pure dyestuff from 12,000 *Murex brandaris*, one type of murex molluscs. These calculations have been applied to ancient dyeing technologies, since a precise understanding of the ancient dyeing techniques is lacking.



*Fig. 1.3: Costumes in the style of the Mycenaean and Minoan periods. (Courtesy of the Lyceum club of Greek Women Costume Collection).*



However, the Minoans did not necessarily need the pure substance for their textiles (Burke 1999). A strong, vivid, and colourfast colour can be obtained with much less murex. This technical misunderstanding, combined with the Thera frescoes and the knowledge of Roman extravagance have contributed to the idea of the Minoan culture as being luxurious and sophisticated.

Roots from the madder plant can also be used for red dyes. We are less sure about the blue colours, but it was probably obtained from woad. The yellow could be obtained from either saffron or safflower flowers. On the Thera frescoes, women gather saffron and we know from the Late Bronze Age inscriptions that safflower was cultivated on palace land, most probably for dye substances to be used in the textile industry (Nosch 2004).

## TECHNOLOGY AND THE ORGANISATION OF PRODUCTION

Textiles in Minoan times were made of wool, flax and – possibly – silk (Barber 1991). An intact silk cocoon was found on Thera, and some carved seals depict moths. This may indicate the use of silk already in the Bronze Age. Still, wool was the major fibre in textile production. Analyses of animal bones from excavations of Minoan sites in Crete show that the majority of sheep bones belong to rather old animals. This suggests that sheep were kept for lambing, milk and wool, and only butchered at an old age (Militello 2007). At Thera, archaeo-zoological and palaeo-botanical analyses have shown that wool and flax were available on the island (Tzachili 2007).

Wool or flax fibres were prepared and spun with a drop spindle in the Bronze Age. This process was extremely time-consuming (Andersson and Nosch 2003). When enough thread had been produced, the thread was mounted on a warp-weighted loom. This flexible technology could be used for both plain and pattern weaving.

One would expect to find spindle whorls and loom weights at any Minoan site. Such textile tools are needed to cover even the most basic needs of a Bronze Age community. However, archaeologists encounter an intriguing situation: In Minoan Crete, loom weights are found in abundance, but the finds of spindle whorls are rare (Burke 1997, note 9). In order to weave with the loom weights, the Minoans would have needed to spin – but their spinning tools are missing in the archaeological record. Also at Thera, almost no spindle whorls are attested in the archaeological record (Tzachili 2007). It is even more intriguing that the opposite situation is attested on the sites on mainland Greece: many spindle whorls are found but few loom weights. Scholars are still investigating these peculiar situations. One possibility is that tools of perishable materials were used for spinning in Crete, while the mainlanders used perishable materials – or simply stones – to obtain tension in their warp weighted loom.

The people of Thera probably produced textiles for domestic use as well as for trade: this is suggested by the discovery of a Linear A clay tablet with accounts and the ideogram for textiles. Another fresco at Thera shows ships with sails, and sailcloth must have been important to a population of traders and fishermen.



According to Pietro Militello, textile production in the Minoan Bronze Age shifted and changed nature over the centuries. In the so-called First Palace period, about 2000–1700 BC, textile production was mainly a household activity, but the rising powers of the Minoan palaces required a more specialised production, in particular for gift exchange and creating networks between palaces within the Minoan culture and with foreign powers. In the Second Palace period, about 1700 to 1450 BC, productive centres, the so-called Villas, monitored the textile production, either in the villa itself or outside in the territory under its control. After Thera was destroyed by the eruption, the mainlanders, the Mycenaens, took over Crete. They installed a highly centralised textile production (Militello 2007).

Thera, however, is not a palace site. It is an island town, and thus the theories of palatial structures monitoring textile production cannot be directly applied to the productive activities there. Evidence for weaving is abundant at Thera, and the loom weights show a remarkable uniformity. This may suggest that textile production was, if not controlled, at least coordinated among the town people. The spatial distribution as well may indicate a specialisation of textile production and a concentration in some hands: loom weights are found accumulated in specific town houses. Of the eleven partially or completely excavated houses, only four contain loom weights. In the houses with the ladies in the frescoes (Figs 1.1 and 1.2), no loom weights were found (Tzachili 2007). This suggests that the activities carried out in these houses were not spinning and weaving. Greek archaeologist Iris Tzachili points out that the archaeological evidence from Thera actually conflicts with the traditional idea of ancient textile production being carried out everywhere and by everyone.

Iris Tzachili suggests that textile production at Akrotiri operated in a context involving some kind of women's cooperative, similar to a guild, in which the duties and profits would have been shared, possibly according to the skills of the participants. She makes a stimulating comparison with the fresco of the saffron gatherer (Fig. 1.1): here several women work individually, but collect saffron in similar baskets and deliver the flowers to a collective basket (Tzachili 2007).

## INTERPRETING MINOAN DRESS

Nowhere is Minoan costume so well represented as in the frescoes at Thera. However, the elaborate dresses are not a Theran phenomenon: at other Minoan sites such as Hagia Triada and Knossos in Crete, there are fragments of frescoes showing similar costumes. Also, carved seals and figurines show female figures in bodices and skirts. A famous example is the so-called Snake Goddess from Knossos (Fig. 1.4). Her bodice is similar to the other Minoan ladies, but her dress is designed differently and supplemented with an apron.

Naturally, scholars have been questioning the status of the women depicted. Are they ordinary women dressing up for a special occasion? Are they aristocrats? Or are they goddesses? The context in which the women are depicted is exotic and even supernatural.

The items with which they are depicted – saffron and snakes – recall a spiritual and luxurious universe.

During a seminar for a group of design students, I showed a ‘Minoan’ ivory figurine, now in the Boston Museum of Fine Arts (Fig. 1.5). This figurine has caused many scholarly discussions about its authenticity and the issue is still debated. To my great surprise, the design students who have no scholarly training in art history or archaeology, immediately reacted to the figurine. They found it ‘Victorian’ and dated it to around AD 1900, based on the design of the dress. In fact, as Kenneth Lapatin has shown, the statuette is probably a fake (Lapatin 2003). It was intriguing how the trained eyes of design students immediately spotted the 19th century style of the figurine’s costume. This is to me an example of how design studies can contribute to archaeology and textile research.



*Fig 1.4: Knossos Snake Goddess statuette. (The Archaeological Museum of Heraklion)*

## MINOAN COSTUME IN THE 21ST CENTURY

Can Minoan designs be used in the design process of the 21st century? A pilot study conducted recently in a Greek design school was aimed at merging the Greek past with contemporary design. One of the results was the design of toothbrushes inspired by the Minoan dresses depicted in frescoes from Santorini. Thus, history can sometimes be used as a source of inspiration for innovative design (Perivoliotis 2005).

However, another tendency, that of retrospection or looking back to the past in order

to construct a national identity and national design, can also be observed. The Greek design students used Minoan art as ‘Hellenic art’, and thus established a direct connection between the Bronze Age cultures and today. The aim was to strengthen contemporary Greek design, and in this process, Minoan art contributed to the construction of a modern national identity and of Greek design as a brand. From the historian’s point of view, it is interesting how Minoan culture today is integrated in Greek culture, although the Minoans definitely did not speak Greek and the Minoan culture is quite different from the Mycenaean and the later classical Greek cultures. Scholars today emphasise how the Minoan culture is “produced and consumed” by tourists as well as specialists (Hamilakis and Momigliano 2006).

The exotic nature of Minoan culture used to cause perplexity in the (self-) understanding of Greek history. Dancing women with bare breasts were not easy to connect with classical democracy and philosophy. Colourful dresses and veils did not correspond to the traditional picture of Greek white marble statues. In recent years,

however, the traditional view has been questioned. A powerful manifestation of the integration of the Minoan past into Greek history was the opening ceremony of the Olympic Games in Athens in 2004 (Fig. 1.6). The procession representing Greek history started out with women in Minoan dresses. These colourful costumes thus set a new agenda for both Greek culture and – perhaps – for the fashion industry. Ariadne’s thread revealed the secrets of the labyrinth, and Theseus wanted to use his sails as a means of



*Fig 1.5: Statuette of a snake goddess, Museum of Fine Arts, Boston. (Photograph © 2007 Museum of Fine Arts, Boston)*



Fig 1.6: Opening ceremony, Olympic Games, Athens, August 2004. (Photo © Michael Steele/Getty Images/All over Press). See also extracts of opening ceremony on [http://www.olympic.org/uk/index\\_uk.asp](http://www.olympic.org/uk/index_uk.asp)>

communication. We are still questioning the message of the Minoan costumes, but without doubt they represent a powerful manifestation of a civilisation communicating its culture through dress.

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