Seals in Dilmun Society

The use and value of Bronze Age seals from Saar, Bahrain

Sophie Tews

Image on front page: Steatite Dilmun Seal from Saar (Crawford 2001,58)

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Introduction

The subject of this thesis is the use and value of the seals found in Saar, a Bronze Age archaeological site on Bahrain. These seals were found back in the archaeological record in quite large numbers. They show various sorts of iconography and are made of a number of materials. In this thesis, I will investigate whether the characteristics of the seals and the archaeological context they were found in can be used to make a valid reconstruction of what the value of these objects was, besides their obvious function of sealing wares.

During excavations in Saar, in the northern part of the island, burials and dwellings were recovered. In both of these, typical Bahraini style seals were found. These seals show resemblances to both Mesopotamian and Indus Valley seals, which have been the subject of many studies. However, the seals from Bahrain, especially the value they had in society, are still quite poorly understood, mainly due to the archaeological focus on monumental structures and burial mounds in Bahrain. Many of the seals, for example, were found in domestic areas, but in the burials from Saar, a certain amount of seals was recovered as well. In my view, the contexts in which seals were found are able to inform us about the function and meaning that was given to these objects, and in this thesis, I will test this hypothesis.

The methodology I will use to test the hypothesis will be to analyse the seal styles which have been found, their contexts and wear-patterns in order to be able to answer my research question: What was the value and use of seals found in Saar?

This thesis consists of five chapters. The first chapter is a general introduction of Bahrain and Saar. In the second and third chapter I will discuss the different seal styles, their materials, production and the iconography of the seals. In the fourth chapter I will describe the contexts of the seals from the Saar settlement, and in the fifth chapter the contexts of the Saar burial field. Lastly, in the conclusion, I hope to give an answer to the question: what can the contexts of the seals tell us about the social value that was given to them in the past?

1 Bahrain and the History of Archaeological Research

1.1 Bahrain

Bahrain is a small island in the Persian Gulf. It measures about 45 km in length and 25 km in width and is the largest island of an archipelago of more than thirty islands divided over two groups; the Bahrain group and the Hawar group (fig.2). This latter island group lies further to the south (Rice 2000, 18). The archipelago is surrounded by a shallow sea. Today, the islands population depends largely on the profits of the oil business (Srivastava 1991, 5).

The climate on the island is hot and arid. The annual precipitation does not exceeds 75mm, and the average temperature in January is 18,5°C and 39,1°C in August (Rice 2000,18). Bahrain consists of horizontally oriented sedimentary rocks, which were formed in the Late Tertiary period. The uplift of these geological formations continued throughout historical times, and is caused by the Arabian plate which moves northwards and plunges underneath the Iranian plate (Rice 2000, 20).

A special feature of the geology of the island is the availability of freshwater. The limestone of the island has absorbed precipitation for millions of years in fossil aquifers. These sources of freshwater have made it, and still make it, attractive to live on Bahrain, and it is an important reason for the prosperity of the island in antiquity.

1.2 The History of Archaeological Research on the Island

Among the first scholars who took interest in the island were Captain E.L. Durand in 1870 and Theodore Bent in 1890. These men were both stunned by the enormous amount of burial mounds present on the island, nowadays estimated at a total of 172.000 (Larsen 1983, 45). In 1880, the scholar Rawlinson published his theory that the island of Bahrain could be identified with the land of Dilmun, a polity mentioned in cuneiform texts from Mesopotamian states, but not identified until this time. After this publication, the interest in Bahrain grew and more archaeological expeditions were set out to the island, such as the expeditions of

Mackay in 1925 and of P.B. Cornwall in 1944. These expeditions were mainly focused on the tumuli and not so much on settlement sites (Mughal 1983, 3). Although both the exact location of the land of Dilmun, as well as its geographical extent are still a matter of discussion, it is nowadays generally accepted that Bahrain and the adjacent eastern province of Saudi Arabia constituted the heart of ancient Dilmun (Laursen 2008, 155).

The first expedition which took an interest in the settlement sites of the island was a Danish expedition which took place between 1953 and 1970, under the supervision of P.V. Glob and G. Bibby (Bibby 1969). In these years, the archaeologists recovered evidence, such as the site at Qal'at al-Bahrain in the north of the island, and other settlement sites, which proved that Bahrain was not merely an 'island of the dead', something that was suggested because of the many burial mounds, but that the island had certainly been inhabited. Furthermore, the archaeologists from the Danish expedition also created a pottery sequence from the pottery recovered at several different sites on Bahrain, such as Qal'at al-Bahrain, Barbar and Diraz (fig.2) which is still valid for the archaeology of Bahrain.

After 1970 many more archaeological expeditions have taken place on the island, both to investigate the famous burial mounds, as well as to investigate the habitation on the island through history and the role that the island presumably had in the intensive trading network of the Persian Gulf.

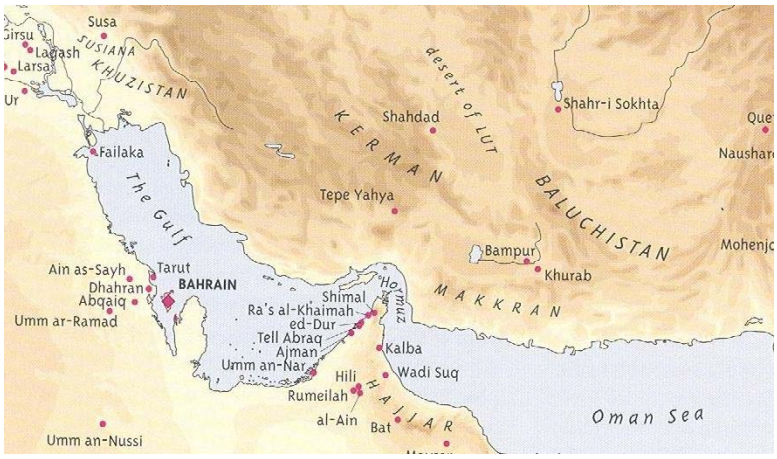


Fig.3 Geographical map of the Persian Gulf Region during the Dilmun period (after Rice 2000,14)

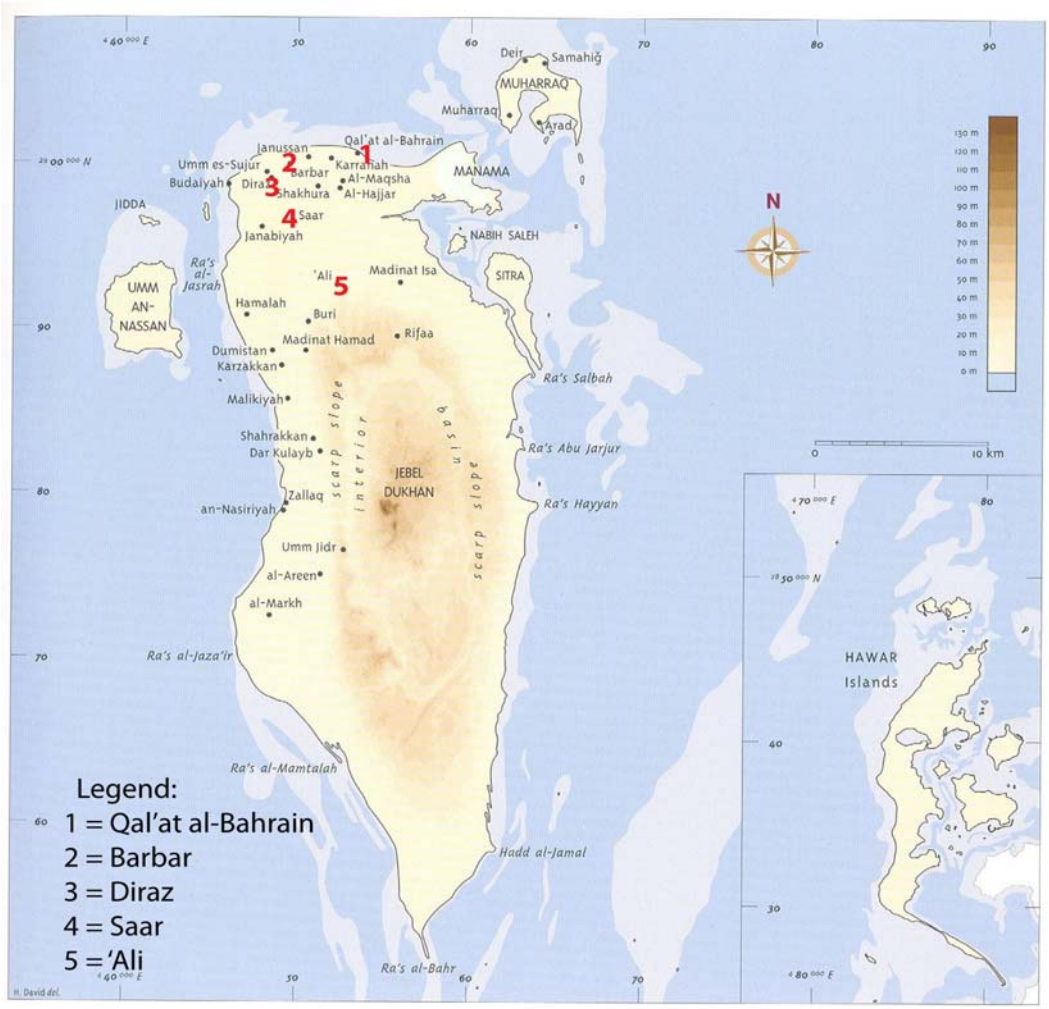


Fig. 4 Geographical map of Bahrain with its archaeological key sites (after Rice 2000, 19)

1.3 Chronology

The archaeological expeditions of the last decades have made it possible to make a cultural sequence of the islands occupation, which is based on the archaeological data from the burials and the settlement sites. The chronological sequence of the island starts at ca. 2800 BC. It is plausible that older remains are present on the island as well, although this is not investigated very thoroughly.

From ca. 2800-500 BC, the so-called Dilmun culture (table 2) is present on the island. This culture is divided in the Early Dilmun period, dating from ca. 2800-1600 BC, and Late Dilmun period, which dates from 1600-ca 500 BC. From circa 300 BC-600 AD, in the so-called Tylos period, the island is part of the Hellenistic culture (Rice 2000).

This thesis focuses on the seals from the Early Dilmun culture, which is subdivided into a First social formation, and a Second social formation (table 1). The latter is again subdivided into three phases (Højlund 2007, 123-127). In the following, the aforementioned periods will be discussed.

Table 1 Chronological Chart of Social formations on Dilmun

Period	Phase	Absolute date
First social formation		2800-2050 BC
Second social formation	City IIa City IIb-c Post-City IIc	2050-1950 BC 1950-1800 BC 1800-1600 BC

1.3.1 First social formation (ca. 2800- 2050 BC)

The first social formation is based upon the uniform archaeological evidence found throughout the settlement sites on the island. This material comprises household produced cooking pots, imported vessels and fine wares from Mesopotamia. The Mesopotamian wares seem to point towards some sort of contact, probably trade or some other form of exchange, which is also supported by information from Mesopotamian cuneiform texts (Højlund 2007, 123-124). No seals have been recovered from this period, and it is therefore assumed that these objects were not used on the island at this time.

Unlike the contemporary Umm-an-Nar culture villages on the Oman peninsula to the east of Bahrain, which had stone towers and city walls, the settlements from this period on Bahrain seem to have been small and unfortified, and major architecture, such as temples, palaces and warehouses are not present. The burial mounds built in this period belong to the so-called early type mounds and have a relatively simple construction (Højlund 2007, 129). It seems that the society on Bahrain in this period existed of simple, kinship-based societies without permanent hierarchy (Højlund 2007, 136).

1.3.2 Second social formation (2050-1600 BC)

The second social formation starts at circa 2050 BC, when the previously mentioned kinship-based society changes, as the social complexity on the island seems to increase. This second formation, which is especially evident from the excavation data of Qal'at al-Bahrain, is based on a number of changes in the material culture found on the island after 2050 BC. Qal'at al-Bahrain, a small trading post in the previous period, expanded to become a city of fifteen hectares with a stone fortification wall, a palace and a complex of warehouses. On different locations on the island, religious monumental buildings were constructed, such as the temples at Barbar and Diraz (fig.2) Another significant change, also around 2050 BC, is the construction of the enormous burial mounds near 'Ali (fig.2) It is believed that these very large burial mounds represent a ruling lineage (Højlund 2007, 124), which could also be an explanation for the appearance of the monumental architecture. Furthermore, stamp seals, made in a very distinct local style, start to make an appearance on the island in this period. These developments seem to have been concentrated in the northern part of the island. This is probably because the circumstances on this part of the island were most favourable.

This second formation is divided into three phases, called after the different levels of the city at Qal'at al-Bahrain (table 1). In the first of these phases, City IIa period (2050- ca 1950 BC), the Indus civilization seems to have had quite some influence on the Dilmun society. This can be seen, for example, in the shape of the seals. Although the seals on Bahrain are round, instead of the square seals used in the Indus civilization, they do have the similarity of being stamp seals, instead of cylinder seals, as used in Mesopotamia. They also show other similarities to the Indus seals, mainly in the iconography. On some of these early seals found on Bahrain, the Indus script was present. However, it is doubtful that the inhabitants of Bahrain were able to read this, as the Indus script on the seals is not very credible as being the same script as from the Indus Valley (Wright 2010, 163). More evidence for contact between Bahrain and the Indus Civilization can be found in the weight system on Bahrain. The in Bahrain

excavated square blocks of certain sizes were also found at sites in the Indus Valley. It is believed that the weight system was probably adopted by the inhabitants of Bahrain from the Indus Valley civilization. Furthermore, Indus pottery occurs in settlements and in graves. All these artefacts occur in a context with other artefacts typical to Bahrain, which makes it more likely that the objects belonged to natives of Bahrain and not to Indus merchants instead (Højlund 2007, 125).

Besides the influence from the Indus Valley there is also evidence, such as the iconography on some of the seals and the layout of some of the temples, for Mesopotamian influence on the Dilmun society. (Højlund 2007, 125).

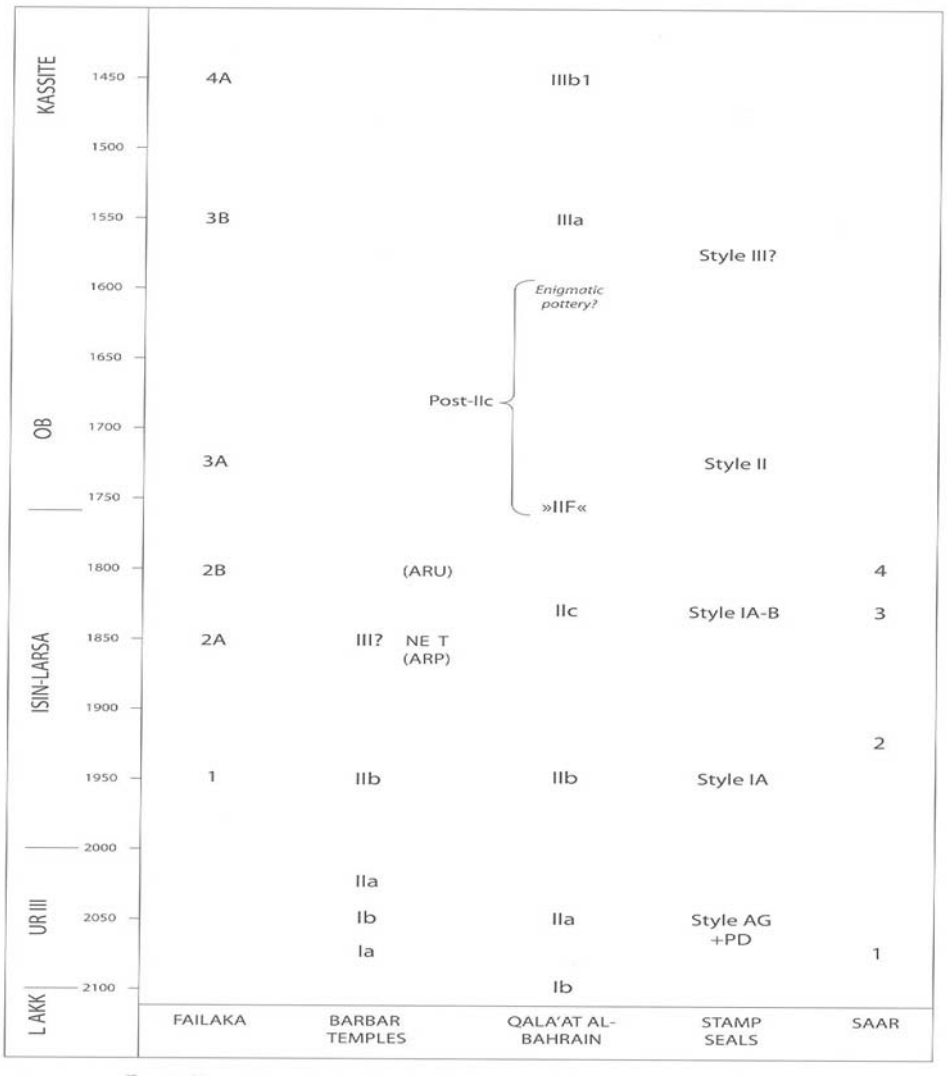
In the second phase, the City IIb-c period (ca. 1950-1800 BC), the influence from the Indus Valley seems to decline, although it does not entirely disappear. The square weights are not found as much in these levels as they were in the levels of the previous phase, and neither are they found at the newly founded settlement on Failaka, an island near the coast of Kuweit (fig.1) which is believed to have been a part of the Dilmun polity in this period (Bibby 1969). Instead, barrel-shaped Mesopotamian weights seem to have been used. The stamp seals change in style and start to show more similarities to Mesopotamian seals than to Indus seals, although they remain to be stamp seals. More fortifications around villages were built as well (Højlund 2007, 125-26).

In this period, the Ur III empire collapsed and Mesopotamia lost its influence on the Persian Gulf region. According to Oppenheim (1954) and Crawford (2005) (Højlund 2007, 126), this made it possible for Dilmun to monopolize the trade of copper and develop political and military strength in the Gulf (Højlund 2007, 126), which might be an explanation for the appearance of fortified villages from this period onwards.

The last phase of the second formation is the post-IIc period (ca 1800-1600 BC). In this period, the Dilmun culture seems to collapse and the occupation on the island seems to decline dramatically (Andersen and Højlund 2003, 329). Some of the villages, such as Saar, are abandoned, the evidence for public institutions diminishes and there is a widespread scarcity of finds in Bahrain after this period.

It is believed that this collapse is connected to the breakdown of the Babylonian state in South Mesopotamia (Højlund 2007, 127). This situation in Bahrain stays the same until the mid second millennium (around 1500 BC), when the island is colonized by other polities, for example the Kassites from Mesopotamia.

Table 2 Chronological Chart for the Early and Middle Dilmun Periods (Højlund 2007, 12)



1.4 Saar

This thesis focuses on the seals found at Saar, a site located in the north of the island (fig.2), which exists of a settlement and a burial field. Evidence from deep soundings on the site have recovered pottery dating to the first social formation

(ca. 2300 BC), but the main phase of the settlement can be dated to the already discussed City IIb phase (1950-1850 BC) (Rice 2000, 63). The site was inhabited for approximately 400 years, before it was abandoned in the City IIc period.

The site is located on a slight elevation, approximately 13 m above sea level, running parallel to the west coast of Bahrain (Moon 2000, 63). Nowadays, the distance between the site and the coast is 7 km, but, evidence shows that it is likely that the sea was nearer in antiquity, perhaps only some 3 km (Moon 2000, 63). Fresh water sources and cultivable land lies to the east of the settlement, and to the west of the village, the Saar Burial Field is located. Other villages on the island, such as Diraz and Qal'at al- Bahrain (fig.2) are never more than 10 km away, which makes it very likely that the inhabitants of Saar had contact with these other societies on the island (Moon 2000, 63).

The town's economy depended for a large part on marine resources, as shown by archaeobotanical and faunal remains: 90% of the bone recovered from Saar is of marine fish, and the remaining 10% belong to sheep, goat, and in a few cases cattle. Plant remains show overwhelming evidence for date cultivation. This plant could be used for different purposes such as food, building and craft material. The date palm is nowadays still a much cultivated plant on the island (Moon 2000, 66). The occurrence of exotic material such as carnelian, steatite and copper indicate that the inhabitants of the island participated in the trading activities on the island. No evidence has been recovered that tells us whether Saar participated in trade with areas overseas, or that it traded mainly with other settlement on Bahrain itself (Moon 2000, 62). One could perhaps expect, however, that a trading post concerned with sea-faring would be located closer to the sea than Saar, which makes it more plausible that Saar was only involved in trade over land, between the different villages on the island, and that the main port of the island was the much larger Qal'at al-Bahrain.

The first excavations which took place on the site were those of the archaeological expeditions under supervision of M. Ibrahim in 1977-1979 (Ibrahim 1982), after the site was discovered in a survey in 1977. This first expedition was focused on the hill near the modern village of Saar, because it was

believed that this hill was a *tell* (Arabic for mound, a typical occupation site in Near Eastern archaeology) containing a settlement site with multiple accumulated occupation layers. In the excavation the archaeologists found out that the hill did not consist of a settlement, but of a burial field with different types of burials, including many interconnected burial mounds, called the burial complex. This burial complex was, because of the way it was constructed, nicknamed the 'Honeycomb Complex'. The content of the graves, mainly the pottery sherds, made it possible to date most of the burial mounds to the City IIb-c period (ca. 1950-1800 BC). Excavation works on the burial site were resumed in 1980-1982.

Near to the burial complex, a settlement site formed out of at least eighty-four stone buildings is situated, of which sixty-eight have been excavated extensively (Killick and Moon 2005, 7). It was excavated between 1990 and 1999 by the London-Bahrain Archaeological Expedition, and the main phase is dated to ca. 2050 BC-1750 BC (Killick and Moon 2005). Soundings into deeper levels have shown that the site was probably already inhabited in the City I period, around 2300 BC, and thereby making it contemporaneous with the burial mounds.

The excavators aimed "to contribute to the archaeology of the Arabian Gulf by excavating a settlement of the so-called Early Dilmun period in Bahrain" (Killick and Moon 2005, 1). The researchers who initiated the expedition felt that, although settlement sites in Bahrain were investigated, the mainstream archaeology of Bahrain was still too much focussed on the burial mounds and the large monumental architecture, such as the temples at Barbar and Qal'at al-Bahrain, instead of on the every day life of people in the Early Dilmun period. They made the decision to excavate Ancient Saar on basis of the location; it was easily accessible, without much disturbance of the soil, and soundings in 1983 and 1985 had already proved that there was a settlement site located in this area, which could not be said of other possible locations (Killick and Moon 2005, 2). At the end of the excavation seasons, it was estimated that about 75% of the settlement was excavated, a total amount of 84 buildings.

The settlement had three general phases, of which the second phase, which is of the settlement in its heyday, was investigated the most thoroughly.

In the entire settlement, there are no stand-alone buildings; instead the dwellings were built in rows, sharing walls and, occasionally, yards. A group of buildings which share these features is called a block. A total of twenty blocks were excavated, separated from each other by streets and squares. These blocks are all quite similar and do not show any evidence for social differences, neither do they show any evidence for grouping according to profession, as some sort of guilds (Moon 2000, 64).

The majority of the buildings were domestic areas. This was concluded on the basis of the similarity of the layout and installations found in the dwellings. However, there are five buildings which can be seen as an exception to this. These buildings include a temple, a well, a large kiln and two circular structures towards the south-eastern border of the settlement (Killick and Moon 2005, 7).
Most of the structures consisted of two or three rooms: an inner and outer room, and occasionally a yard. The simplest form of this layout is when the inner room is built into a corner of the larger outer room. This created the structure of a building with one larger, L-shaped room, and one smaller room in one of the corners (fig.3). Variations on this type of layout are buildings in which one room is built adjacent to the other (fig.3), or buildings in which the larger rooms are not rectangular, which makes that there is no large L-shaped room (Killick and Moon 2005, 149-150). Archaeobotanical research has shown that the inner room was roofed with palm leaves, but that the L-shaped room was open, or perhaps partly shaded (Moon 2000, 64), which suggests that it was probably more like a court than a real room.

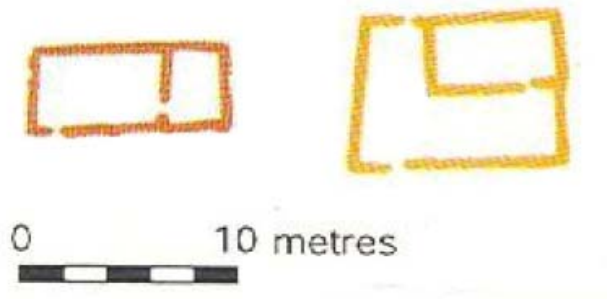


Fig. 3 A standard building with L-shaped room (right) and a variation on the standard lay-out (left) (after Crawford 2001, 8)

The installations, the non-removable parts of the furniture such as hearths, which were recovered in the buildings also showed, as mentioned above, great resemblance to one another. The ones that were present in most of the buildings can be divided into two main groups: the cooking supplies and the storage supplies. The cooking supplies often consisted either of a hearth, often semicircular, built against a wall, or of fire pits. In most dwellings, cooking pot supports were built next to the hearth. These consisted of two or more plastered stones placed upright (Killick and Moon 2005, 156-157). The cooking supplies were most often situated in the larger room or court. Storage supplies consisted of pits, some of which were plastered, and buried jars. In many houses bins or basins which served to hold solids or liquids were also present (Killick and Moon 2005, 158).

The artefacts recovered from the buildings were quite uniform as well. The largest group of artefacts was handmade pottery. Another large group was that of to stone tools. Between 20 and 25% of the registered artefacts belonged to this category (Moon 2000, 64). Other artefacts that were found were (fragments of) copper - especially fish-hooks were often found - beads and bitumen (Moon 2000, 65).

The resemblance in the way dwellings were built and furnished seem to point to a well-organised and structured, perhaps centrally governed village. None of the excavated buildings showed any evidence of wealth or prestige, which, according to the excavators, shows that there was not evidently ruled by an elite (Moon 2000, 65).

One of the buildings in the settlement is believed to be a temple (Killick and Moon 2005, 7). This building, building 201, has a trapezoidal form and three major stone pillars in its centre. Its outer room is larger than all other outer rooms, and its inner room consists of a small chamber in the back. Although this building is clearly different than the other buildings in the village, no decisive evidence has been recovered which proves this building had a religious function. Perhaps it is more likely that this building was a space where inhabitants of the village gathered, without it having a religious function.

The settlement at Saar was, like other settlements on the island, abandoned around 1700 BC. There is no archaeological evidence that this happened in anything else than a peaceful fashion (Moon 2000, 66).

1.5 The Material Used for this Thesis

Archaeological projects on the island have recovered a large quantity of seals; altogether this amount is too large to be the subject of a bachelor thesis. Because of this, I have chosen only to study the seals that were recovered at the site of Saar. This has a number of reasons. First, the quantity of excavated seals is not too large for my thesis. Secondly, although I do not have access to the original excavation reports and excavated materials, the excavations on Saar are quite well documented and published, which makes it possible to obtain a lot of information from the site, the excavation, and the seals. And finally, the site of Saar has both a settlement that is excavated, as well as a cemetery, which are two very different contexts which may help to get a clear distinction between the archaeological contexts of the seals, and may thus help me to answer my questions.

The data that I will use comes from the publications of this site, and is thus not completely primary. Nonetheless, I hope to be able to make a clear overview of the material found, where it was found and how it can help us to understand the value given to the seals and the society they were used in.

Altogether, 95 seals were recovered from the Early Dilmun settlement at Saar, which was excavated between 1990 and 1999 (Crawford 2001, Killick and Moon 2005) and 48 seals were recovered from the burial field at Saar, excavated between 1977- 1979 (Ibrahim 1982) and 1980-82 (Mughal 1983). This makes a total of 143 seals which will be discussed in this thesis.

1.6 Research Objectives and Methodology

In the past, many studies have been concerned with the production of seals, the commercial use of the seals, the iconography of the seals, the material of the seals and the provenance of different seals. In this thesis, I want to focus on the social value of the seals. In my opinion, the archaeological context of objects can

explain something about how people thought about their property and this might be useful in the process of understanding a past society. In this thesis, my aim is to get a little more insight in one small aspect of the Dilmun society on Bahrain. By studying the publications of the excavations at Saar, I hope to be able to say something about the value that was given to a seal by the owner or user of this seal. In order to answer my main question: *What was the social value of the seals and how were the seals used on Bahrain?*, I will discuss the following aspects of the seals:

What material is used for the production of seals, and what can be said about the production of the seals?

The material the seals were made of is an important indicator of value. Was the material obtained from a certain distance, and thus more expensive? Or was it available for every inhabitant of Bahrain? Also, the traces of the production process might say something about the value. How long did this process take? Is there any evidence in the archaeological data that the manufacturing was done by the owner, or can we speak of a production-centre, either in the settlement itself or further away?

What is depicted on the seals?

The depiction on the seals might say something about the value, but might also say something about the status of the owner of the seals. What sort of depiction might go with what sort of status? I will try to investigate this by categorising the different depictions of the seals. Subsequently I will study if these different categories can be linked to different archaeological contexts or material.

What archaeological context do the seals have?

In order to say something about the value, it is important to see where the different seals were found. The place where they were left might give a very good indication of their value.

Where does one find the sealings? Can these locations be linked with the locations of the seals?

The seals were used to make impressions in wet clay: sealings. These objects are also recovered from the excavations, but where? Can the sealings and their locations say anything about the use and social value of the seals?

Who used seals?

Did only the elite use seals, or was it a wider distributed means for commercial goals? Is it possible to see whether the use of seals was connected to sex or age of the owner?

2 Seals from Saar

2.1 Introduction

In this chapter I will present the main characteristics of the seals that were recovered in archaeological excavations at Saar, with exception of the styles and iconography of the seals, which will be discussed in the next chapter. The presented data will be the starting point of the further analysis of the seals.

The classification of the different styles of the seals used in this and the next chapter is the one made by Kjærum (1983). He based his classification of six styles on almost five hundred seals found on Failaka, a small island in the Kuwait Bay (Crawford 2001, 16), and made these classifications according to the material, the size and the decorations on both sides of the seals. In Saar, only five of the six styles are present.

2.2 Seals in General

The use of seals in the Near East started already around 6000 BC (Duistermaat 2010, 167). They served in the first place as a utensil to indicate ones property and are in this period more connected to the changing ideas about ones property in a community than they are connected to the existence hierarchy and bureaucracy (Duistermaat 2010, 167). These first seals are stones with incisions, which are stamped onto the wet clay to close of a jar or other containers.

The seals were in use throughout the millennia; in the fourth millennium in Mesopotamia, they appear in the form of a cylinder. In this period, the first archaeologically retrievable complex state forms also begin to appear, and the seals are not merely used to mark ones property within the community only, but they are also used to sign documents and to close of trading goods. Cylinder seals subsequently took on a quite important role in complex societies, such as Mesopotamian states, and stayed in use until the first millennium BC (Potts 2010, 20).

Seals were not only used in Mesopotamia, but also in the Indus Valley, where a comparable process of state formation occurred around 3300 BC (Wright 2010, 79). Here they appeared in the shape of stamp seals.

On Bahrain, the first seals were recovered in 1957 at the excavation of Qal'at al-Bahrain, in the north of the island (Bibby 1969). These 'Dilmun seals' are stamp seals, and are most often made of stone. A depiction was incised into the obverse part of the seal i.e. the part that was used to make a mark in the wet clay. The reverse of the seal is often a pierced boss, through which a cord or something similar could be drawn to wear the seal around the neck or on the clothing.

The seals were used in Bahrain in the same way as they were used in Mesopotamia and in the Indus Valley: to mark goods with the identity of the owner. Different sorts of depictions, shapes and materials can be identified. These differences can be explained by the use of the seal: a means to indicate an owner. This is, of course, more easily when distinct depictions are used.

The Dilmun seals appear to be part of social changes on the island which occurred around 2050 BC, and have been discussed in the previous chapter.

2.3 Chronology of the Seals

Dating of seals is not easy. One of the problems is that the seals cannot be dated themselves; they always have to be dated according to the context they were in, the other objects they were found with, such as pottery, and to their style. This is a problem, because the seals are not always found in association with objects that are well dated or in a closed stratigraphic context. Furthermore, the seals are small, and therefore vulnerable to turbation of the soil. As a result, the seals that are found in a particular stratigraphic context do not necessarily belong to that context. In Mesopotamia, it was a common practice to curate seals (During, pers. comm.): they were kept by relatives when the owner of the seal deceased as heirlooms, which makes it possible that seals circulated in a society for decades. It is plausible that the Dilmun seals were kept in the society in a similar way.

Nonetheless, a relative dating is possible for the seals on Bahrain, mostly by using the data from Qal'at al-Bahrain, one of the most intensive studied sites on the island. This sequence served as a starting point for the dating of the seals from the entire island (table 2) (Crawford 2001, 18-19).

C14 determinations from charred seeds found at the settlement site of Saar were used to date the settlement. The outcome of this dating was that the village was in use from ca 2300-1700 BC. However, most buildings in the village were built and used in the period between 1900-1700 BC (Moon 2000, 63). After ca. 1700 BC some buildings in the village were still in use, but the heydays of the village were over. Logically, the seals that were recovered from the settlement must be dated somewhere in this period.

The evidence from Qal'at al-Bahrain points to a chronological sequence of the seals, that begins with the Persian Gulf, or Arabian Gulf, style seals and the Proto-Dilmun seals which partially overlapped with one another. These styles were succeeded by the Dilmun Style Ia, Ib, II and III (table 2), of which the latter does not occur in the archaeological record of Saar. The characteristics and iconography of the styles will be discussed extensively in the next chapter. The iconographical and technological developmentments visible in the seals support the sequence made. This, however, does not exclude the coexistence of the different seal styles. In building 56 of the Saar settlement, for example, both the Persian Gulf style and the Dilmun style II were found. This example, however extreme, could support the theory about the curation of the seals.

Using the finds from the burial complex, Ibrahim (1982, 39) claims that the seals made of shell are the prototypes of the steatite ones. The reason for this claim is that the shell seals are found in burials which are presumably older than the burials in which steatite seals were found. However, this theory was invalidated by the excavators of the succeeding project on the burial field in 1980-82. According to Mughal (1983, 11) the tumuli and the burials in the burial complex did not succeed each other, but coexisted, which would mean that the seals of different materials, such as shell and steatite, further discussed in the next paragraph, could also have coexisted.

2.4 Material of the Seals

Different materials were used for the production of the seals. The most common of these materials is steatite, but seals made of other types of stone, shell, ivory and even ceramic were also found. In the following paragraph these different types will be discussed.

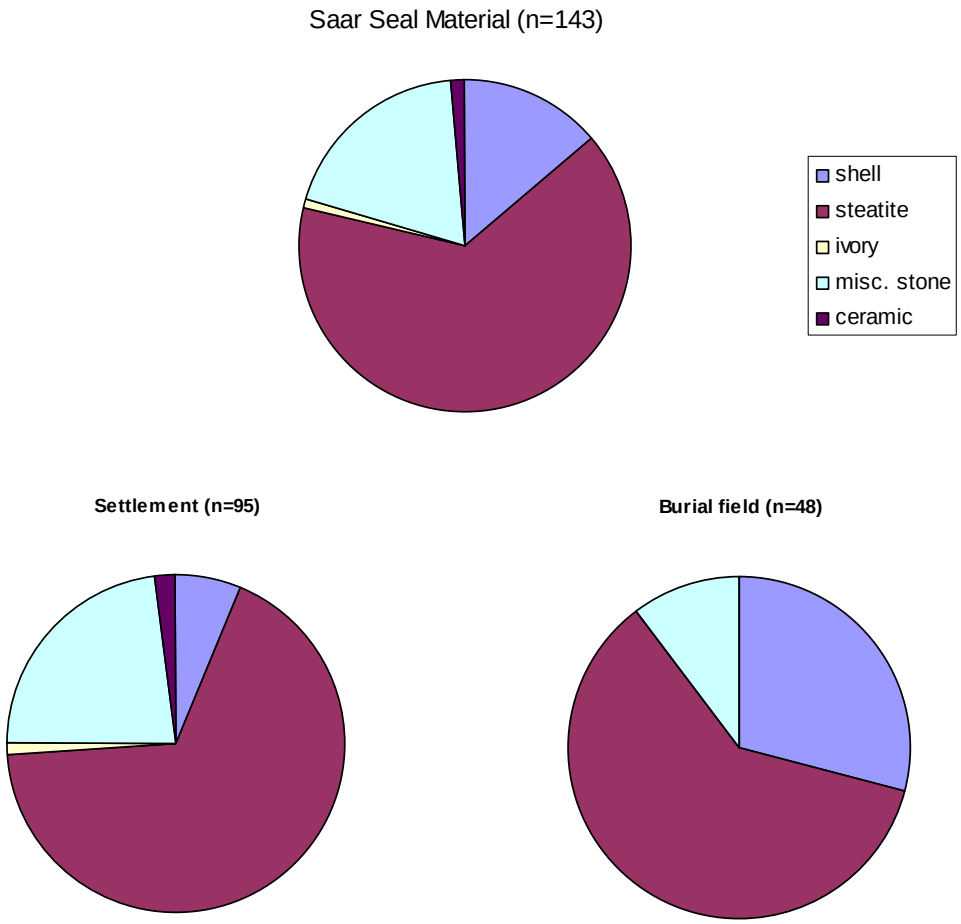


Fig. 4 Pie-charts of seal materials from Saar, the settlement and burial field.

2.4.1 Steatite

In total, 65% (n=92) of the seals which were found at Saar were made of steatite. This type of stone, also known as soapstone, is very soft, due to the high percentage of talc. Due to its softness, steatite was a popular material in ancient times for carving amulets and small objects such as seals. To harden the stone,

and make it less vulnerable to damage, the stone must be fired to temperatures between 800 and 1000°C which will increase the hardness to approximately 4-5 on Mohs' scale (Rapp 2009, 125). Another way to make the stone more sustainable is to glaze the surface.

In the Saar settlement, sixty five out of the ninety five retrieved seals (over 68%) were made of steatite. The majority (66%, n=43) of these steatite seals had either well-preserved glaze on the seal or traces of glaze. The glazing of the seal was done as one of the last steps in the production of the seal, for the practical reason that the stone would be less easy to edit when hardened.

In the burial complex of Saar, twenty-nine out of forty-eight seals (60%) were made of steatite. Seven of these seals (24%) had traces of a white or whitish-grey glaze. It is certainly not unlikely that the number of seals that were originally glazed is even higher, for the simple reason that glazing the material enhances the sustainability of the seals, which is quite necessary with this very soft type of stone.

Steatite is not available on the island itself, which must mean that the inhabitants of the island imported the material. Unfortunately, not enough detailed mineralogical research is undertaken to determine the source of the steatite used. Nonetheless, there are some areas within the reach of the Dilmun society that have steatite sources, such as Oman (Killick and Moon 2005, 205) and Iran (Beale, 1973). As above mentioned, steatite was a popular material, of which many small objects were made in the ancient Near East. It is therefore quite understandable that Dilmun, with its large role in the Gulf trade could have obtained this material quite easily.

One find from the Burial Complex at Saar might be able to shed more light on the production of the steatite seals. In one of the graves, a rectangular tablet of steatite was obtained, which had incised lines and marks on it. According to the excavators, it is possible that this is an unfinished seal (Mughal 1983, 99). If this is true, it could point out that the steatite was imported to Bahrain in stone slabs and that the seals were produced on the island itself. This theory is not inconceivable, but not proven either, since no production sites for this material

have been found. The styles of the seals are very peculiar to Bahrain though, which could also be seen as an indication of local production of seals from imported material (Killick and Moon 2005, 351).

The seals are not the only steatite products recovered from Saar. A considerable number of steatite vessels were found as well. An interesting fact is that almost all of these vessels had the same type of dot-in-circle design, or sometimes dot-in-double circle, as found on the reverse of the steatite seals. Unlike the seals however, the vessels are thought to be imported from the Arabian mainland or Iran, where this type of vessel is much more common (Killick and Moon 2005, 205, 351).

2.4.2 Shell

Another material that was often used in the production of seals, and typical for the Dilmun types of seal, is shell. Shell is a material that is easily worked, and for the inhabitants of Dilmun probably more readily available than the comparable material bone (Killick and Moon 2005, 176). The seals are generally made of a conch shell which is available on the island of Bahrain itself. The seal is formed of the apex of the shell, and the design on the obverse consists of the natural volute of the inside of the shell itself (fig.5).

Fig. 5 Obverse side of shell 'seal' from the Saar settlement. Diam. 3,5cm, height 1,4cm (Crawford 2001, 75).

In the burial field, fifteen shell seals were recovered, which show different designs besides the natural volute. Some of these seals have a smoothened surface, while others have incised lines, strokes, or even animal figures (Ibrahim 1982, 37). It is remarkable that in the Saar settlement, only six shell seals were found; none of these had extra decoration besides the volute. Furthermore, only one of these shells showed a perforated back, just as the steatite seals, the other shell objects did not have a perforated back, and it is therefore quite plausible that these objects were not worn. For these five shell

objects it is not ruled out that these are unfinished seals (Killick and Moon 2005, 180), but perhaps it is more realistic to determine them as ornaments.

Although these shell objects are identified as seals in the Saar publications, one can seriously question whether these objects were used in the same way as the steatite seals. They all show the same pattern, the natural volute, which would be impractical and confusing if these objects were used to seal property. This problem could perhaps be solved by incising decorations on the obverse part of the shell, however, the only seals which showed these additional decorations were found in the burial field, and not in the settlement. In the burial field, three times as much shell seals were found as in the settlement. Furthermore, a large part of the shell seals found in the settlement did not have a perforated back. This, together with the fact that there were no sealings found in the settlement made with a shell seal, make it seem likely that the shell 'seals' were not used in the same way as the steatite seals.

2.4.3. Miscellaneous Materials

Besides steatite and shell, some other materials were used to produce seals. However, the majority of the recovered seals were not made of one of these materials; hence they are grouped under the 'miscellaneous materials'.

Twenty-eight out of the hundred-and-forty-three seals (19,5%) which were recovered from Saar were made of another type of stone than steatite. These stone types varied from a very hard dark stone, to brown, green and even pinkish stone types. Unfortunately, these materials have not been identified by petrologists. It is notable that the Persian Gulf Style seals are often made of a dark, hard and often slightly speckled stone. This type of stone is, like many other types, not available on the island of Bahrain; therefore the stone used for production of these seals must have been obtained from other regions.

Also recovered was one, or possibly two seals made of ivory at the settlement site of Saar. One of these is definitely made of ivory, probably not from elephant tusk, but hippopotamus or dugong ivory (Crawford 2001, 53). The second one is made of a 'shiny white stone or perhaps ivory' (Crawford 2001, 56).

It is difficult to say, without further information, how and where the inhabitants of Bahrain got the ivory. If it is dugong-ivory, it might be possible that they were self-sufficient, because this animal lives in warm, shallow seawater. It is therefore not unthinkable that this animal lived nearby Bahrain in the Bronze Age, but this is only a suggestion. If it is hippopotamus ivory, the inhabitants of Bahrain might have imported it from the mainland. The ivory seal is rectangular, which is not a common form for a Dilmun seal. The characteristic Dilmun depiction, however, seems to point out that the depiction was made in Bahrain.

The last miscellaneous material that was found at Saar is ceramic. Two seals of this material are recovered from the settlement site. The first one is merely a fragment. The back is largely broken away, although a perforation is still visible. On the front of the seal a couple of incised lines are visible. The argument which makes this object a seal is that this design is incised, not impressed, and therefore, the object is not a token (Crawford 2001, 67).

The second ceramic seal was recovered in an oven in one of the buildings at the settlement. In the publication about the seals from Saar (Crawford 2001), this object is identified as a seal, however, this is questionable; there is no depiction on the object, except for the thin, superficial, parallel lines on the obverse, which might be an impression of some sort, and there is no perforation in the gable back. Although it is not unthinkable that ceramic seals did exist, the context of this object and the uncommon material make it seem plausible that this is not a seal, but perhaps a token or something of the sort. I did involve the object in this thesis, however, mainly because it is classified as a seal in the Saar publications.

2.5 Production of the Seals

Just as there are differences in the materials used for production of the seals, there are changes in the tools used for the production. For different styles, different tools have been used.

The production of the seals started with the rough material, which was cut or sawed into the shape of the seal. It is likely that, in the case of stone, the

material was imported, and that the cutting happened on the island itself. However, it is also possible that this first step of production took place in the provenance area of the stone, and that the material was thereafter transported to Bahrain as blanks. No decisive evidence has been retrieved on the island that allows us to evaluate whether the processing of stone did or did not happen at Saar or on the island in general. However, the distinct and characteristic styles on the island seem to point to a local production (Killick and Moon 2005, 351).

After the seal was formed, it was likely polished and decorated. For the latter, two types of tools were probably used. The first of these is a sharp object, probably made of flint or bronze, with which the decorations are incised into the dark stone of the Persian Gulf Style seals. In the Proto-Dilmun style, the sharp object is also used to make incisions. The difference between this style and the Persian Gulf style is that the material is most often the soft steatite, therefore the incisions are deeper. It seems that another type of tool, or perhaps the same tool used in a different way, was used in this style. These deeper incisions have an angular cross-section. The tool was also used for the scraping of somewhat larger areas on the surface of the seal, such as the torsos of the human figures and the bodies of the animals (Crawford 2001, 18).

The second type of tool used is a drill. This tool was not often used to make the decorations on the Persian Gulf and the Proto-Dilmun style seals, but from the Style Ia onwards, the drill is used for the heads of animals and for the characteristic dot-in-circle motifs on the reverse of these seals. At least two types of drills can be distinguished from the seals found at the Saar settlement. The first one used is the tubular drill, which can be recognised by the circular wear marks and the slightly bevelled edge of the inner core of the hole in the stone. The second distinguishable type of drill used is the double-drill. It was used to make the dot-and-circle motifs on the reverse of the seals and occasionally also for motifs on the obverse side of the seals.

As already mentioned, the steatite seals were often heated or glazed after they were finished. This implies that nothing else could be added to the motif, and

it also made it easier to print in the wet clay. The glossy surface of the heated or glazed seals also made them look more attractive (Kjaerum 2000, 101).

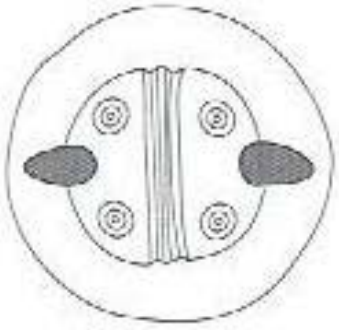


Fig. 6 Standard reverse of the Dilmun style seals (after Rice 2000, 103)

From the Style Ia seals onward, the reverse of the seal became more standardised than it was in the Persian Gulf and Proto-Dilmun type of seals. As above mentioned, the boss is incised with three parallel lines, and on either side of these lines are the dot-and-circle motifs (fig.6). From this standardisation it can be deduced that the owners of seals had a very distinctive idea of what a seal was supposed to look like, and maybe one could even think of a production centre. Unfortunately there is not enough evidence to support this hypothesis and it therefore remains questionable.

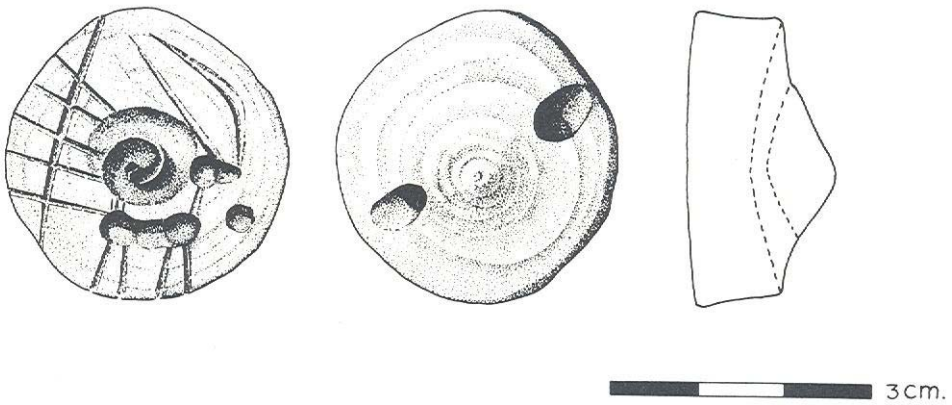


Fig. 7 Shell seal with additional decorations (after Ibrahim 1982, 157)

A similar description of the production process can be given for the seals made of shell. The process started with the shell, which was very likely retrieved

from the island itself. Subsequently, the shell was sawed off just above the base and polished, which made the natural volute seem like it was engraved in the shell. On the reverse side of the shell, a hole was drilled so that the seal could be worn as a pendant (fig.7). For the decorations on the shell seals, a sharp object and the drill were used to create the bodies of the animals and the other decorations (Al Khalifa and Rice 1986, 253-258).

3 The Seal Styles and Iconography

3.1 Introduction

Throughout the centuries in which seals were used on Bahrain, the style of the seals changed. In the seal assemblage from the Saar settlement and burial field, five seal styles have been identified, according to the extensive study of iconography and seal styles by Kjaerum (1983), which will be discussed in this chapter.

The iconography on the obverse side of the seals was used to make the impression in wet clay. It might be said that the depiction on the seals was associated with the person owning the seal. Despite the importance of the iconography of the seals, I will only discuss the main characteristics of which I think are important for answering the questions of this thesis[1].

3.2 Basic Shape of the Seals

Dilmun seals are primarily distinguished from the Indus Valley and Mesopotamian seals in terms of their shape. The seals made on Bahrain are generally round stamp seals, unlike the Mesopotamian seals which usually have the shape of a cylinder, which could be rolled over wet clay, and the square or rectangular Indus Valley stamp seals. Therefore, the Dilmun seals are already quite distinguishable from these other types at first sight.

As mentioned in the previous chapters, there are similarities between seals found in Bahrain and the Mesopotamian and Indus Valley seals. Furthermore, square seals and one cylinder seal was found at Saar. The typical shape and the typical style of the iconography (Kjaerum 1986, 270) however, indicate that the seals were not imported, but developed on the island itself.

3.3 Persian Gulf Style and Proto-Dilmun Style Seals

The Persian Gulf, or Arabian Gulf, Style seals are the first seals that appear on the island. These seals are most often made of a dark coloured, often speckled, hard

[1] All the information about the different styles comes from Crawford 2001, 16-30.

stone, as discussed in the previous chapter. The decorations are lightly incised, probably due to the hard material they are made of. They have rather simple decorations and the composition often consists of a couple of animal figures, which do not seem to interact with each other (fig.8). The seals also show symbols or so-called filler motifs, which can consist of a human footprint (fig.8), astral signs, like stars or a crescent moon, some sort of grid, and other geometric designs.

This type of seal shows great similarities with the Indus seals, especially in the style of the iconography. It is believed however, that these seals were not imported from the Indus Valley, but produced on the island itself, because of the different material the seals are made of- Indus seals are made of steatite- and the presence of an unconvincing version of the Indus script (Wright 2010, 163), which suggests that the characters were written without people being able to read them. None of the seals from Saar had these inscriptions. These similarities to the Indus seals, however, do point to a certain connection with the Indus Valley civilization.

The seals are small, not often more than 2,5 cm in diameter, and have a high small boss, which is perforated and sometimes decorated with a line over the back of the boss (fig. 8).

Fig.8 Persian Gulf style seal, with some animals and the depiction of a human footprint. Diam. 2,6 cm, height 1,2 cm (Rice 2000, 101)

The Proto-Dilmun style is a transitional style and was probably partly contemporaneous with the Persian Gulf Style seals. This type of seal was most often made of steatite. The decorations on these seals are deeper incised, which has probably to do with the soft stone they were made of. These seals are larger and flatter than the Persian Gulf Style seals. Though the depictions of this transitional style remain comparable to the ones on the Persian Gulf Style, it seems like the figures on the Proto-Dilmun seals are not merely loose decorations, but integrated compositions. This integration of the different figures will increase in the later Dilmun styles. A new motif on the Proto-Dilmun style seals is the human figure. Some of these seals have a dot-in-circle motif on the reverse side of the seal, which becomes very typical in the Dilmun Style seals.

In the Saar settlement, at least six seals of the Persian Gulf style were recovered. On five of them, a horned animal is depicted. A figurative human figure, with its arms bent at the elbows and raised, and the legs in mirroring position of the arms, is depicted on the other seal (fig.9). This is exceptional, because human figures are not often depicted on these types of seals.

Fig. 9 Figurative human figure on a Persian Gulf Style seal. Diam. 1,6 cm, height 1,14 cm (Crawford 2001, 61)

In the burial field, five seals made of some other type of stone than steatite were recovered, three of which are possibly Persian Gulf style or Proto-Dilmun style. Neither of them shows the standard three lines and dot-in-circle motif,

typical for the Dilmun Style seals. All three of these seals show the standard iconography for these styles: animals and symbols are depicted on them.

3.4 Dilmun Style Ia, b and Style II Seals

The majority of the seals found at the Saar settlement and Burial Field belong to the Dilmun Style Ia-b seals. They are, like the Proto-Dilmun seals, mostly made of steatite, although some of them are made of ivory or shell. The most common shape for these seals is round, although there are examples which are rectangular. The seals are quite flat and the majority has a diameter which measures between 2 and 3 cm. The reverse of the seals have a very standard decoration typical for this style, which consists of three parallel incised lines over the boss, and four dot-in-circle motifs, two on each side of the three lines (fig.10). All the seals belonging to these styles have that same motif on the reverse.

Fig.10 Dilmun style seal with the characteristic dot-in-circle motif on the reverse (Rice 2000, 103) and horned animals on the obverse. Diam. 2,5 cm, height 1,3 cm (Crawford 2001, 58).

The decoration on the front side of the Dilmun seals is more complex than in the previous styles. They show a great variety in depictions, with human figures, animals and symbols. Between different figures on the seals, there seems to be an interaction. Many different sorts of animals are depicted. The heads of these animals mostly consist of one dot-in-circle motif in this style (fig.10), to which ears and such are added. One of the most common animals depicted is a

long-horned quadruped (fig.10, 11), seemingly some kind of goat, or perhaps an oryx or gazelle. This last option is an attractive one, because the gazelle is nowadays associated with grace, beauty and a symbol for good fortune (Crawford 2001, 24). Of course it cannot be said if the animal had the same significance in ancient Dilmun.

Fig.11 Horned quadrupeds on a Dilmun Style seal. Diam. 2.1 cm, height 1,86 cm (Crawford 2001, 71).

Other animals that are depicted are bulls, lions, goats and different kinds of birds. Scorpions are depicted, quite often near the head of the woman in an erotic scene (Rice 2000, 100).

Two seals, as well as one sealing with a depiction of a crab were found in Saar. This animal is only depicted on the Dilmun seals from Saar (fig.12). One could wonder if this depiction might be some indication of a family or business from Saar.

Sometimes a mixture of animals is depicted. This could be, for example, the head of a goat, with the body of a snake and the claws of a lion.
Another common decoration is that animals are depicted in a geometrical way (fig.12), in which the animals seem to be rotating around the edge of the seals.

On the Dilmun Style seals, human figures are depicted on a large scale. They are shown *en profile*, except for their torsos, which are always directed towards the viewer. This changes somewhat in the Dilmun Style Ib seals, on which the torsos of the human figures are also depicted *en profile*.

Fig.12 Seal from the Saar settlement with a depiction of crabs in a geometric pattern. Diam 2,26 cm, height 0,4 cm (Crawford 2001, 62).

The human figures show variation; some figures seem to be nude, some wear robes and others wear a horned headdress (fig.14). This last category is said to depict divine or mythical figures, because of the resemblance to the Mesopotamian depiction of a god (fig.14). Except for this resemblance, no evidence has been found for this theory, but it is certainly not unlikely that figures depicted in this way had some sort of higher place on the hierarchal ladder, either as a god, or as a ruler.

The activities these figures are involved in also show variety. There are hunting scenes, erotic scenes, and beer-drinking scenes (fig.14), which are also known from Mesopotamia. The seals that were found on Bahrain are not the only indicators of contact between Bahrain and the Indus Valley and Mesopotamia. Dilmun types of seals have also been found in Susa and Ur in Mesopotamia, and for example in Lothal, a site in the Indus Valley (fig.13) (Kjaerum 1986, 269-275).

Some figures are depicted together with animals and some are depicted with symbols or astral signs. Some of these activities, if not all, are believed to be part of some sort of ritual (Kjaerum in Rice 2000, 105).

The Dilmun Style Ib differs from the Dilmun Style Ia in terms of their decorations. In this style, other animals, such as the bull, outnumber the horned quadrupeds. Furthermore, the mentioned human figures are depicted somewhat different in the Dilmun style Ib, but otherwise, the style Ib is just a continuation of the Ia style, without any further remarkable differences.

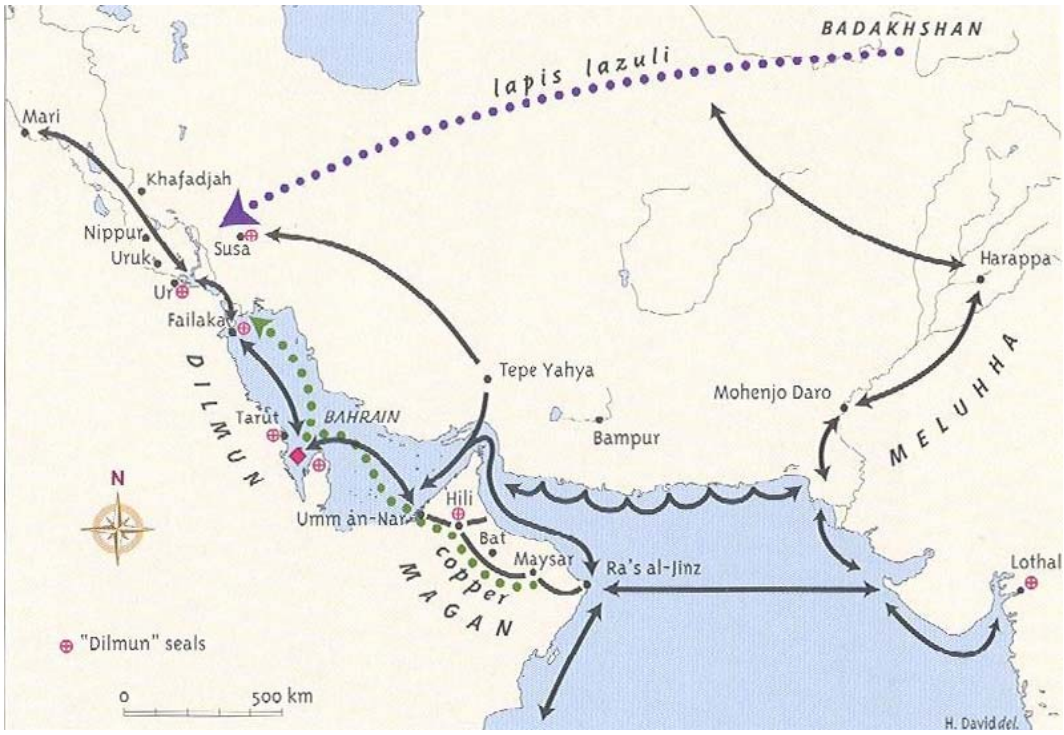


Fig. 13 Bahrain at the crossroads of trade in the Early Bronze Age (Rice 2000, 15)

The last depictions that are regularly seen on the Dilmun Style seals, but also on all the other seal styles, are symbols. In the Dilmun Style I and II these are always combined with the depiction of animals or human figures. Examples of these symbols are, as mentioned above, astral signs such as stars, a crescent moon or a sun. Other symbols are a human footprint, geometrical figures such as grids, stripes and crosses. The trunks of palm trees are also often seen in the depictions of the seals.

The shell objects identified as seals show, partly due to the material, a specific sort of decoration, which does not occur on the other seals. The main characteristic of a shell seal is the natural volute that is used as decoration. The shell seals which were found in the settlement site at Saar did not show any other decoration except for this volute, however, part of the shell seals recovered from the burial site, did show variety in decoration comparable to the steatite seals from the settlement site, such as animals and symbols (Ibrahim 1982, 38).

Fig.14 Style I seal on which a human figure is depicted with a horned headdress in a 'beer-drinking' scene. These sorts of depictions are also known from Mesopotamian seals. Diam. 2,64cm, height 1,32cm (Crawford 2001, 75).

The seal type that succeeded the Dilmun Style Ia-b seals is the Dilmun style II. This style shows many similarities with the previous style, for example in material, though the decorations of this type are in a linear style. The designs of this style are often purely geometric (Crawford 2001, 16-18).

Fig. 15 Seal quantities in the different buildings of the Saar settlement (after Crawford 2001, 8)

4 Context of the Seals: the Saar Settlement

4.1 Introduction

The seals which were discussed in the previous three chapters were utensils for the inhabitants of Saar and they were given a certain value. Eventually, they ended up in the archaeological record. A number of processes could have been responsible for the location in which the seals were found. They could have been deposited, either intentionally, such as the seals that are recovered from the burials, or unintentionally. Furthermore, the seals could have been thrown away, for example because they lost their function, either because of damage to the seal, or because of the changing ideas in society about seals. In the next two chapters, I will study the archaeological contexts of the seals from the Saar settlement and burial field. In that way, I hope to find out whether these contexts are able to inform us about the value that was given to the seals by the Saar inhabitants.

4.2 Seals in the Saar Settlement

As already discussed in a previous chapter, the Saar settlement existed of at least eighty-four buildings of which sixty-eight have been excavated intensively (fig.15) (Killick and Moon 2005, 7). From these sixty-eight buildings and the streets between them, a total of ninety-four seals were recovered. Besides the seals, over two hundred and twenty sealings were found at Saar. They will be discussed in the following paragraphs as well, but only in relation to the seals.

4.3 Seals in the Buildings

Seals were present in 60% of the excavated buildings. In many buildings only one to three seals were found. However, there were also some buildings with a higher concentration of seals. In the following I will discuss the buildings which contained an exceptional high number of seals.

From building 224 (fig.15), a total of seven seals were found, as well as twenty-eight sealings. This building is situated on a square near the temple. This high amount of both seals and sealing would make it seem that this building had,

perhaps besides its function as a domestic space, also a function that can be connected to storage of goods. Of these seven seals, five were found in a floor context, which could mean that these seals were contemporaneously in use until the village was abandoned. In the building next to building 224, building 220 (fig.15), seven more seals, as well as of forty-nine sealings were recovered. Most of the seals recovered from this building came from the area where thirteen of the sealings were found as well (Killick and Moon 2005, 43-50, Crawford 2001, 40), clearly indicating a room for storage.

In building 51 (fig.15), an even higher number of seals were found: a total of ten seals. In the outer room of this building, an unusual high number of pits and storage jars, eight in total, were present, which makes it likely that this building was a location for storage too. Many of these seals were worn, and eight of them were found in the same context, the floor. This, again, could indicate that these seals were used contemporaneously. It could point out, similarly to the buildings 220 and 224, that these seals were still in use when the village was abandoned, but for some reason not taken along. It is interesting that no sealings were found in building 51. This might suggest that it was only a location for sealing and storage of goods, and that the sealed goods were not opened in this building.

Lastly, in the three-roomed building 60, six seals were found, four of them in a floor context. Only one sealing was found in this building.

Besides buildings which contained many seals, there were also buildings which contained many sealings, such as, the already mentioned building 220. In building 211, thirty-seven sealings were found, but no seals were recovered from this building. In building 207, thirty sealings were found, but only three seals.

If the number of seals per block (fig.16) of buildings is considered, a distinction between parts of the village with a high quantity of seals can be made as well.

Block I (buildings 50, 51, 52, 53, 54) has a very high quantity of seals. It consists of only five buildings, but sixteen seals were found here. This very high number of seals can be explained by the above mentioned building 51, which

belongs to this block, were ten seals were found. From the four remaining buildings of this block, six seals were recovered, which is average.

In Block H, which counts at least seven buildings (101, 103, 105, 107, 109, 111, 113), to the contrary, not a single seal and only one sealing was found. This is remarkable, because in most cases, at least one of the buildings of a block contained a seal. Although Block H was not completely excavated, it is remarkable that no seals were found in the seven excavated buildings of this block. Block H is situated in near south-eastern edge of the village together with Block G, at some distance from the other buildings of the settlement. Block G consists of six buildings (100, 102, 104, 106, 108, 110). Only three seals and no sealings were found here. There is, of course, a chance that all the seals were taken with the owners when they left the village, however, the absence of sealings in these buildings make it possible to conclude that these buildings were not used for storage on large scale.

In the central building of the village, the so-called temple (building 201), only one seal was found. The seal concerns a Dilmun seal, made out of steatite, with the depiction of a human figure with horned animals. The seal was found in the large outer room of the building. Some sealings were also found in this building. This does suggest, however, that goods were stored in this structure (Crawford, Killick and Moon 1997, 47-48), but not sealed there.

The seals and sealings which occur together in many buildings make it seem that the seals in Saar were mainly used for the sealing of goods for the storage of household products, or for trading goods.

Although seals and sealings were found throughout the settlement, the buildings which contained a high number of seals and sealings, such as the buildings 220, 224, 60 and 51, were all situated near the broadest street (fig.15). Perhaps it could be deduced that the most important storage rooms of the village lay near this road, clustered in the centre of the village.

There was no significant difference between the amount of seals in an outer or inner room of the buildings, which indicates that seals were used and kept in all parts of the house.

4.4 Damaged seals

A total of 40% (n=38) of the seals recovered from the settlement were either worn or broken. When one considers the abandonment of the village, it seems like, at least for a part of these seals, that they were not taken with the inhabitants of the settlement, because they were damaged and therefore became useless.

The damaged seals seem to be distributed quite evenly over the village, with the exception of the damaged seals in block F (buildings 55, 56, 57 and 62) and Block I (buildings 50, 51, 52, 53 and 54). Block F contained a total of seven seals, of which six were damaged, and Block I contained sixteen seals, seven of which were damaged.

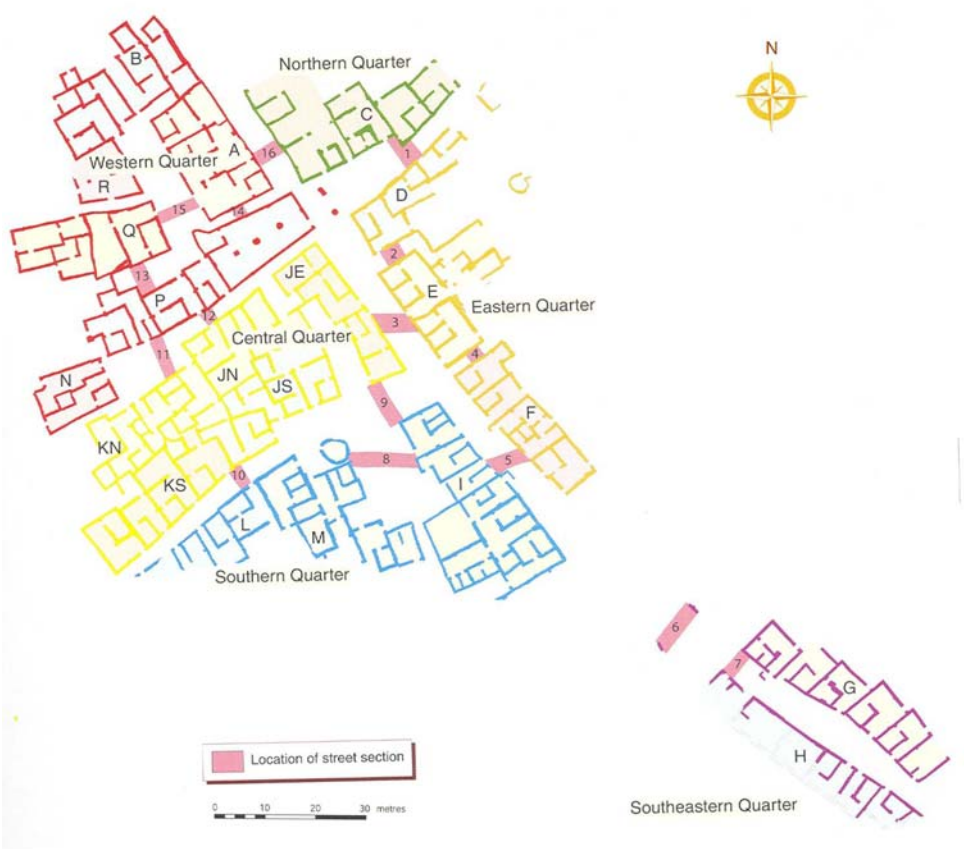
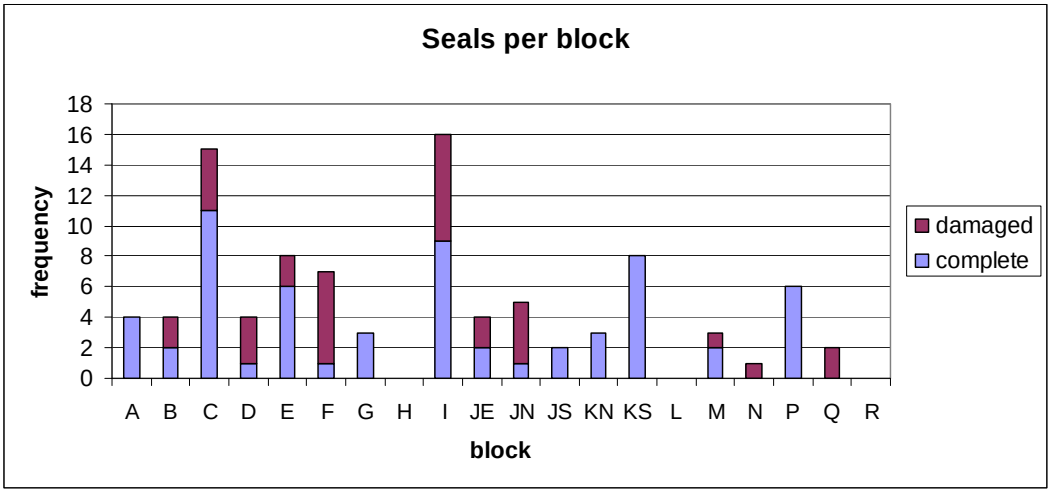


Fig. 16 Plan of the blocks in the Saar settlement (after Killick and Moon 2005, 9)

Table 3 Complete and damaged seals in the Saar settlement per block



In some cases, the contexts show clearly that the damaged seals were discarded, as in the case of the seals found in the context categorised as 'make up', the layers applied to a building during construction. Eight seals were found in this context, and all eight of them were damaged. It is possible that these seals were present in the material from older layers of the settlement which was used to (re)built the houses the seals were eventually found in. It is possible therefore that the seals recovered from the make-up contexts were not used in the houses they were found in, but were already discarded before they ended up in their archaeological context.

One of the damaged seals was found in a midden, a domestic waste dump. Only a fragment of this seal was recovered, which makes it seem that the seal was consciously discarded because of the damage.

In most cases however, the context of the damaged seals cannot be so easily explained. Eleven damaged seals were found on the floors of buildings, six were found in an occupation context and six more damaged seals were retrieved from a collapsed building. In these cases, it is perhaps more likely that the seals were curated, but that they were for some reason not taken along when the settlement was abandoned.

One seal from the settlement was broken and repaired with bitumen in antiquity (fig.17) and four other seals were re-worked, some of them possibly re-

cut (Crawford 2001, 68). These particular seals can be used as evidence for the curation of seals, or at least to point out that these objects were not carelessly thrown away, but mended to be of use for a longer time.

Fig.17 Seal from the settlement which is mended with bitumen in antiquity. Diam. 2.2cm, height 1,2cm (Crawford 2001, 68)

Twenty-eight of the seals which were found in the settlement were worn, most often over the boss, but wear around the edges is also frequent. Some of the seals are also worn on the obverse side (fig.18). The wear pattern, which is most frequent on the backsides of the seals, could indicate that the seals were worn with the back against some sort of fabric to which the seal abraded. The wear on the edges of the seals could also be explained by this. The perforations through the back of the seals also showed wear in many cases, indicating that something, such as a cord, was drawn through this perforation. This makes it likely that the seal were worn, either around the neck, or perhaps on the clothing.

The wear on the obverse of the seal can probably be explained by frequent use of the seals. Experimental archaeology could in the future perhaps clarify these wear patterns to more detail.

The wear patterns and evidence for the mending of seals indicate that the seals were utensils, but not disposable objects. This might be used as evidence that the seals did have a certain value, either as precious goods or as a personal belonging.

Fig.18 Obverse of badly worn Persian Gulf style seal. Diam. 2,9 cm, height 1,1 cm (Crawford 2001, 59)

4.5 Complete seals

The greater part of the seals, 59% (n=56), was not visibly damaged, and must therefore have been left in the village for some other reason.

Of the fifty-six complete seals recovered from the settlement, eighteen (32%) came out an ‘occupation’ context. One of these seals was made of shell. Apart from one Persian Gulf Style seal and one Dilmun Style II seal, all of these seals can be categorised under the Dilmun style Ia or b. The most common decoration of the seals from this context is a horned animal with or without human figures, which is also the most common decoration for Dilmun style I seals in general. The Persian Gulf style seal and the Dilmun style II seal were both found in the same building. This might suggest that the seals were kept in a household for many years, even after the original owner had passed away, as some kind of heirloom. This practice is also known from the Mesopotamian seals (During, pers. comm.).

Twenty-five (44%) of the seals were found on the floors of buildings. Three of these seals were made of shell, one of clay and the others were all made of stone. One or possibly two seals of the Persian Gulf style were found in this context, as well as one possible Proto-Dilmun style seal. The depictions on these seals most often consisted of one or multiple horned animals and human figures, sometimes together, sometimes apart, which can be said about the seven complete seals found in a ‘collapse’ context as well.

5 Context of the Seals: the Saar Burial Field

5.1 The Saar Burial Field

The burial field near the Saar settlement belongs to the largest concentrations of burials on Bahrain. Using aerial photography, the number of burial mounds is estimated on approximately 15.000. Unfortunately, though inevitably, the majority of these mounds are robbed, either in antiquity or in more recent times. The construction of a causeway, which would cut right through many of the graves, was in 1977 reason for the start of an archaeological project. The mounds were surveyed, and subsequently, sixty-two burial mounds were excavated in two seasons. In these seasons, five types of burials were recognised, and defined: (Ibrahim 1982, 7):

- Type I: Mound with a single burial built above the surface (fig.19)
- Type II: Mound with a single burial cut into the bedrock
- Type III: Mound with a central burial connected with subsidiary burials
- Type IV: Mound provided with a shaft entrance
- Type V: Burial complex

It was believed by the excavators that the type I mounds were the earliest, whereas the burial complex (type V) was the latest form of burial at Saar (Ibrahim 1982, 39). According to Ibrahim, a development in the way the mounds were constructed was visible, especially in the type III and type V mounds: type III mounds consist of one central burial with one or more subsidiary burials, the type V burials do not have a central burial anymore, but are all built against one another. However, in the subsequent excavations, that focused on the burial complex, between 1980 and 1983, the identical pottery types found in the burials made it more likely that the burial complex existed contemporaneously with the other burial types. This pottery was used to date the burials, and pointed out that the burials dated from the late third millennium to the early second millennium, contemporaneously with the settlement site at Saar.

As above mentioned, many of the burials were robbed in antiquity and were found empty. Only a few skeletons were preserved in a condition that

allowed the sex and age of the deceased to be determined. It appeared that adult males and females, as well as infants and children were buried in the mounds (Ibrahim 1982, 93). It was not uncommon to find the remains of multiple persons in the same burial, although they often did have their own tomb inside the mound. Quite striking is that never more than one seal was found in a mound, even if it was the burial of multiple individuals.

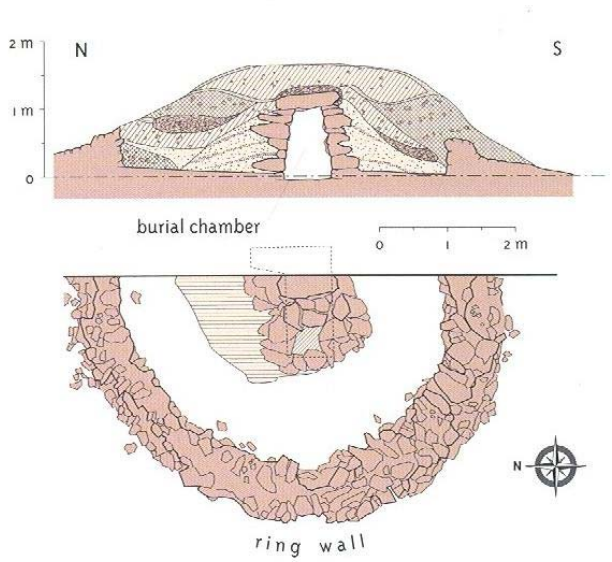


Fig.19 Section and plan of a type I burial mound (Rice 2000, 38)

During the expeditions between 1977 and 1979, twenty-three seals were found, twelve of which were made of shell (52%) and eleven of steatite (48%) (Ibrahim 1982, 37). Other grave goods that were commonly found in the burials were fragments of copper, beads, shells and pottery, which was probably filled with some perishable material like food. Bitumen, sometimes with reed impressions, was recovered from some of the graves, indicating that baskets and such, probably holding perishable materials, were also part of the grave-good inventory. Animal bones belong to the material often recovered from graves as well. These bones, often the remains of young sheep or goat, likely represent remnants of a communal meal (Olijdam 2010, 151).

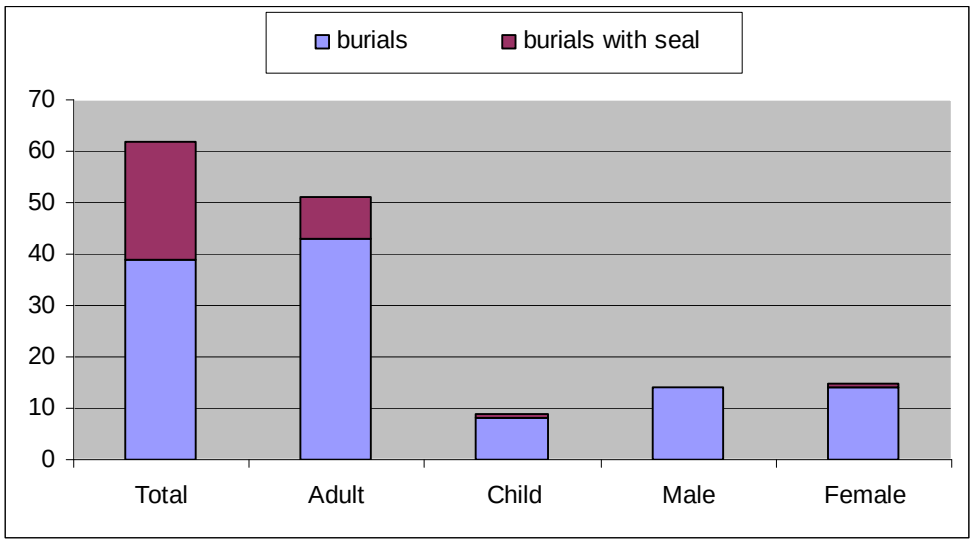
From 1980-1983, another two seasons of excavation were carried out, which focussed on the burial complex, although some mounds were excavated as well. In total, 178 graves were excavated in these years (Mughal 1983, 9) and a relatively low number of twenty-five seals were obtained from them. Seventeen of the twenty-five seals were made of steatite (68%), three of shell (12%), and four (16%) were made of some other type of stone than steatite (Mughal 1983, 95-99).

In these two expeditions, a total of forty-eight seals were recovered from the 240 excavated burials. The burial mound types I-III contained exclusively shell seals, which were decorated with designs of symbols and animals. In the type IV mounds, two examples of steatite seals were found, one of which is double-sided, the only example of this kind of seal in Saar (Ibrahim 1982, 38). The other is a Dilmun style I seal. The other steatite seals are all found in the Burial Complex.

5.2 Seals in Relation to Sex and Age

The condition of the skeletal remains found in the burials was poor. Only in some cases it was possible to determine the sex and age of the individual. Unfortunately, this made it in many cases impossible to link the presence of seals in burials to the age or sex of the deceased.

Table 4 Age and sex of skeletal remains in burials excavated between 1977 and 1979, with and without seals



In the sixty-two burials excavated between 1977 and 1979, fifty-one skeletons were from adult individuals (tab.4). Fourteen (27%) of these were male, fifteen (29%) were female. The sex of the remainder (44%) could not be determined, due to the poor preservation of the bones. Nine (14%) of the skeletons could be identified as children, but it was not possible to determine the sex of these individuals (Ibrahim1982, 40-69). In the remaining two burials, the age of the individuals could not be determined.

From the twenty-three seals found in the burials excavated in the seasons 1977-1979, only eight were found in a burial of which the sex or age of the individual could be determined. Six (26%) of the seals were found in the burials of adults, one of those was found in the burial of a female. The sex of the skeletons in the rest of the burials could not be determined. The seal from the female burial, made of shell, was found in a type II mound. The other grave goods were fragments of bronze and pottery sherds. The mound was robbed, and it is very likely that originally more grave goods were present. Unfortunately, this is only one seal, in one grave of which the skeleton was preserved in a fair condition. Therefore, this find does not make it possible to conclude that females also owned and used seals in their lives; neither does it prove that this woman had some higher status than the other buried women. However, the presence of a seal in the grave of a female does make it plausible that both males and females were buried with seals. It could be possible that more women were buried with a seal, but that the bones from these burials are not preserved well enough to determine the sex or not at all. From this find, it can be deduced that the seals are not restricted to male burials only.

Another seal, one of steatite, was found in the burial of a child. Again, this is only one seal in one burial, but it does make it more likely that seals were not restricted to adults in the burials, and perhaps not in the society either. In this respect, the solely commercial function of the seals can be questioned. If one assumes that the seals had only a commercial function, the connection with a child would be somewhat strange. A seal in the grave of a child does not have to rule

out the commercial function of the objects, but does make it reasonable to consider a personal value as well.

In the campaigns of 1980-1982, hundred and seventy eight burials were excavated, and, as already mentioned, twenty five seals were discovered. The seals were often found together with bronzes, pottery, stone ware and shells, as they were in the earlier excavations of Ibrahim. Unfortunately, the sex and age of the skeletal remains from the burials excavated in these years, and the presence or absence of seals in these burials is not very well published, which makes it not possible to make a similar reconstruction from these data as I have done for the burials excavated between 1977 and 1979.

5.3 The Material of the Seals in the Burials

A total of 60% (n=29) of the seals from the graves was made of steatite. These were all recovered from the graves type IV mounds or the burial complex. The majority of these seals are of Dilmun Style I, though some are Persian Gulf style seals. The most common decoration is that of one or multiple horned animals and one or more human figures, sometimes depicted together, sometimes apart, which is comparable to the depictions on the seals from the settlement.

Ten percent (n=5) of the seals were made of some other type of stone than steatite. Despite this difference in material, the depictions on these seals were very much like the ones on the steatite seals.

In total, 29% (n=14) of the seals from the burial field were made of shell. The majority of these seals had, besides the natural volute of the shell, also some other decoration, often animals incised in the obverse side of the seal (fig.20). These are only recovered from the burial site, shell seals with added decorations are not found in the settlement site. Ibrahim (1982, 39) suggests that the shell seals were the prototypes of the steatite ones, because in the mound types I-III, according to him the early types of mounds, only the shell seals were found. However, as already mentioned, it is more likely that the mound type I-V were all contemporaneous. Furthermore, more than two-hundred sealings were recovered from Saar, but none of these had an impression of a shell seal. This makes it seem

like these shell objects were not used as a seal, but perhaps as ornament, or as a replacement of the steatite seals in the graves.

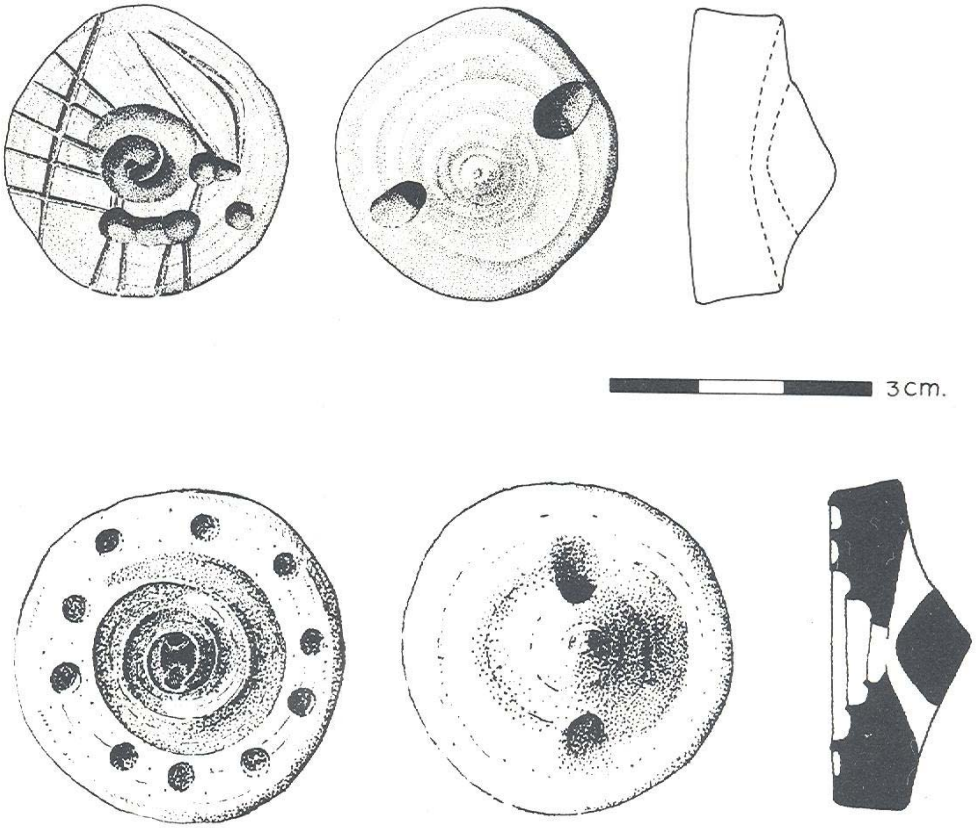


Fig.20 Shell seal with additional decorations besides the natural volute of the shell (Ibrahim 1982, 157)

6 Conclusion

6.1 Introduction

As discussed in the introduction, the aim of this thesis was to investigate the social value of the seals from Saar used in the Bronze Age. To be able to do this, I have discussed the material and production of the seals, the iconography as well as the archaeological contexts of the seals in chapters 2 to 5. In this concluding chapter, the above discussed data will be summarised according to the questions asked in chapter 1, and the results will be discussed. Furthermore, an attempt will be made to answer the questions posed in the introduction of this thesis.

6.2 The Material and Production of the Seals

The first seals which occurred on Bahrain were made of dark, hard, stone. Due to the hard material, the decorations on the seals were lightly incised. The stone was not available on the island, and must have been brought to the island.

The majority of the seals found at Saar were made of steatite, which also had to be imported onto the island. Although this material had to be imported, it does not seem that it was an exclusive material, taken into account the large amount of steatite seals that have been found at Saar. Apparently, a large part of the population could afford a steatite seal.

The second largest material group is shell, a material indigenous to the island. These objects are determined as seals in the Saar publications, however, I do not think that these objects were actually used in the same way as the steatite seals. Only six of the ninety-five seals found in Saar settlement were made of shell. The use of shell seals would have been confusing, due to the same imprint all of these ‘seals’ have, namely that of the natural volute. This explains the reason why there were no sealings found with the impression of a shell seal.

Furthermore, at the burial field, fourteen shell seals were found. It is remarkable that only these had, besides the natural volute of the shell, other decorations, such as lines, symbols and animals. These seals all have a perforated back, comparable to those of the steatite seals. However, a perforation in the back

could also be an indication that these objects were used as ornaments, pendants or even buttons. On the basis of these aforementioned characteristics of the shell seals at Saar, it seems very plausible, that the shell objects were not used as seal, but that they were used either as ornaments, or perhaps as some sort of replacement for the steatite seals in the burials. The decorations on the shell seals, which only occur on those from the Burial Field, and not at the settlement site, can support this hypothesis. It is possible that these shell objects from the settlement were also meant to go into the burials, but that they were not finished when the settlement was abandoned, and were left behind.

The Dilmun seals made of ivory and ceramic found at the Saar settlement is evidence that these seals were not just made of steatite, but that they were also made of other, maybe more easily accessible materials. The ivory seal is unique in the Saar site, and could therefore perhaps be seen as a seal made of a luxurious material. However, the settlement was abandoned, which makes it possible that many other seals were made out of ivory, but that the owners of these took their ivory seals along with them.

The excavators of the settlement site believe that Saar was a village without a distinct elite, because of the lack of material evidence for an elite group. The material of the seals can be used as a support to this view. None of the materials used seems to have been a very exclusive, except for, perhaps, the ivory, of which only one, or possibly two, was found.

The production of the seals seems to have been a household activity. There is no evidence recovered from the village that seals were made in one particular area in the village.

6.3 The Depiction on the Seals

The most common depiction on the seals, in both the settlement site and the burial field, is the long-horned animal, which could perhaps represent a gazelle. On a part of the seals with this depiction, one or multiple human figures are depicted on the seal too. In this case, it is common that the human figures are in any sort of action involving the animal(s). It is also common that the depiction on the seals is

of one or multiple human figures. The different styles found in Saar have similar depictions, although there are definitely some differences. In the Persian Gulf style, for example, no human figures are depicted, whereas on the Dilmun styles, the human figure is a very common decoration.

The Dilmun style seals have a very distinct form and decoration on the reverse: three lines with four dot-in-circle motif around the lines. This could mean that there was a very distinct idea about what seals were supposed to look like, not just among the people from Saar, but among people from the entire 'Dilmun' region.

A clear distinction between different contexts of the seals and different depictions cannot be made; every kind of depiction is found in every part of the settlement and burial field. This seems to indicate that everyone who used a seal could choose their own depiction. This could point toward the use of 'identity' within the society, the inhabitants of Saar chose the decorations they liked, and perhaps identified with.

6.4 The Archaeological Contexts of the Seals

Most of the seals were found in one of the rooms in the buildings. These buildings were built together in blocks, separated from one another by small streets and squares. In the majority of these blocks, at least one seal was found. This could point out that seals were not only used by an elite group, but that every household owned and used at least one seal.

Thirty-eight (41%) of the ninety-five seals recovered from the settlement site were damaged. This high percentage can probably, at least partly, be explained by the abandonment of the village in the mid second millennium BC. It is likely that the inhabitants of Saar took the undamaged seals with them, and left the damaged seals in the village, where they were found by the archaeologists.

Although a high percentage of the found seals were damaged, the majority of them were not. These must therefore have been left in the village for some other reason. It is possible that a number of these were lost or forgotten, but they could also have been intentionally discarded for some other reason than their

condition. A possible explanation can be that the majority of the Dilmun style Ia-b seals were by this time replaced by the Dilmun style II seals. Only one example of a style II seal was found, while more examples of this type were found at comparable settlements which were inhabited after the period in which Saar was abandoned. This makes it possible that the Dilmun style II seals were perhaps taken with the owners, while the 'old fashion' Dilmun style Ia-b were left in the abandoned village.

Only forty-eight seals were recovered from the 240 excavated burials of the burial field. It is important to realize however, that most of the burials were robbed, and the small seals are vulnerable to disturbance of the soil, which means that they could have been replaced to layers which were not excavated, or they could have been robbed as well. Therefore, the number of seals in burials could originally have been higher. Nevertheless, the number of recovered seals still remains quite low. An explanation for this could be that it was more of an exception than a rule to bury a seal along with their owner, and that they were instead kept in the village as heirlooms. This is supported by the Persian Gulf style seal and the Dilmun style II seal which were both found in the same layer of building 56. It is hard to say, though, if these seals where actually used after the owner deceased, or that they were merely kept at the house of, for example, the relatives of the deceased. It could also have been that the seals did not belong to one individual, but that they belonged to a household. However, taken into account the number of seals found in separate houses - often more than one - does make this assumption questionable.

In the burial field it was, unfortunately, due to the poor condition of the bones in most of the graves, in most cases not possible to determine the sex or age of the buried individuals. In some cases however, this was possible. In one burial, a seal was found together with the skeletal remains of a female, in another grave, a seal was found together with the skeletal remains of a child. These examples cannot make a rule, but they do make it more likely that seals were not merely used by men. The seal in the grave of the child also makes it more likely that a seal was not only used to seal goods, perhaps for commercial reasons, but also had

some sort of amulet function. It should however, not be thought that a seal in the grave of child would exclude the commercial function of the seal.

6.5 The Archaeological Contexts of Sealings

Sealings are primarily found in different rooms of the dwellings in the village. No sealings have been found in the burial field. This supports the idea that the seals and sealings were used to seal different kinds of goods, which were meant to be opened again. The sealings that were recovered all had comparable depictions to those of the seals. However, only some of the sealings could be matched to a seal found in the village, it could be that other used seals simply have not been found, have been taken with their owner, or that the sealings which were found in the village were made in another part of the island. As above mentioned, none of the seals was made by a shell seal, which would be easy to recognise because of the volute.

The seals and sealings which occur together in many buildings make it seem that the seals in Saar were mainly used for storage of goods from the households in the village itself, instead of goods from outside the village, though the latter is not entirely excluded. However, the sealing of goods would seem to indicate that the need for marking ones belongings existed, so perhaps the stored goods did not merely belong to one household, but to more households in the village, or the stored goods would eventually be brought to some other village on the island, or maybe even to overseas. More research should be done to surrounding villages on the island to be able to tell something about the contacts and exchanges between different parts of the island.

6.6 The Usage of Seals

From the Saar settlement, it seems most likely that the use of seals was not restricted to a specific group in society. It seems that every household in the villages owned at least one seal, and in many cases, more than one seal was found.

It cannot be said with certainty if the use of seals was restricted to men or women, however, the evidence from the burial field makes it likely that both men and women have used, or at least owned, seals.

It seems from the Saar settlement that seals were primarily used for the sealing of different goods, either for storage or for trade. Given the wear patterns on most of the seals from the settlement and the evidence for re-cutting or reworking of the seals, it seems that seals were not disposable objects, but that they were used for a long time period.

6.7 The Use and Value of Seals at Saar

In this thesis, I have tried to find out whether the seals used at Saar had, besides being a utensil, also a more personal value, perhaps as some sort of amulet. The presence of seals in many of the buildings in Saar makes it seem that the seal was a widely spread object, used not only by persons involved in trade with other communities, but also used for storage of goods. Furthermore, the uniformity of the structures and artefacts in Saar seem to point to a society without major social inequalities. This also supports the hypothesis that every household used seals, and not just the wealthy or powerful ones.

Both the presence of seals in burials, as well as the curation of seals supports the hypothesis that seals were an important personal item.

All the above considered, I think that seals were a very common utensil in society, but they also had a more personal value. They were re-worked, repaired, possible kept as heirlooms, and at least part of the society took their seal with them in the grave. To be able to tell with more certainty if the situation at Saar does also occur at the other sites on Bahrain, the different sites on the island and the seals which have been found there should be studied as well. On the basis of the above mentioned, I think that the seals had multiple values, regarding to the sealing of personal belongings, the commerce on the island, and also the manner in which people presented themselves to the other people in the village.

Summary

This thesis is concerned with the use and value of seals in Bronze Age Bahrain. Between ca. 2800-1500 BC, Bahrain was a prosperous island in the Persian Gulf, with Mesopotamian empires and the Indus Valley Civilization as trading partners. Saar, the site on which this thesis focuses, is a small settlement. Next to it, a burial field is located. Seals were recovered from both of these contexts. In this thesis I wanted to investigate whether the seals were merely utensils for the sealing of (trading)goods, or if they also had a more personal value. In order to do this, I made an analysis of the contexts in which the seals were found, the number of seals, their depictions, materials and wear patterns.

Although seals were found throughout the entire settlement, four of the buildings, often located in the centre, had a high quantity of seals. In most of these buildings, a large amount of sealings was found as well. This could mean that the main storage facilities of the settlement were located near the broadest street of the village, in the centre.

Different depictions on the seals were spread throughout the settlement, indicating that the people who owned seals could probably choose whatever sort of depiction they wanted to have on their seal, and that specific decorations were not restricted to certain groups in the society. It could be said therefore, that the seal decorations were a product of individuality.

In the burial field, it was in many cases not possible to link the presence of a seal in a burial to the sex or age of the individual, due to poor preservation of skeletal remains. However, it can be said that both adults and children, as well as males and females were buried with seals. The evidence is not abundant, but this could at least mean that seals were not restricted to, for example, men only.

The majority of the seals recovered from the settlement as well as from the burial field, were made of steatite. These seals were often glazed, to enhance the sustainability. The remaining seals were made of some other type of stone, ivory or ceramic. Shell seals were also found, more in the burial field than in the settlement. However, these were probably not used as seal. No sealings were

found which showed the natural volute of the shell seals. Furthermore, the shell seals from the burial field had additional decorations besides the volute, which none of the in the settlement found shell seals had. This makes it more likely that these shell objects were ornaments, or maybe even replacements for the steatite seals as grave goods.

Many of the seals showed wear patterns at the reverse, through the perforation hole and around the edges, which make seem that the seals were worn on a cord, possibly against some clothing. On some of the seals, the depiction on the obverse is almost completely worn away. The seals were therefore probably used for a long period of time. Some of the seals recovered from the settlement were mended or re-worked. This indicates that the seals were not disposable objects, but that they were taken care of.

To conclude, my opinion is that the seals were used for the sealing of goods, but that they also had a personal value.

Samenvatting (Dutch Summary)

Het onderwerp van deze scriptie is het gebruik en de waarde van zegels uit Saar, een vindplaats in het noorden van Bahrein, in de Perzische Golf. Waarschijnlijk is dit kleine eiland van ca. 2800-1500 v Chr. de locatie geweest van de Dilmun beschaving, een belangrijke handelspartner van de Mesopotamische rijken en van de Indus beschaving.

Vanaf ca. 2050 v Chr. komen er op het eiland zegels voor, welke gebruikt werden voor het verzegelen van bepaalde goederen, wat onder meer af te leiden is uit het feit dat de zegels in Saar vaak werden gevonden in huizen samen met verzegelingen. Ook laten zij invloeden zien van de Indus en Mesopotamische beschaving, wat er op duidt dat er contact, en waarschijnlijk handel, was tussen deze samenlevingen. Door middel van het analyseren van de archeologische contexten, de afbeeldingen en het materiaal van de zegels heb ik in deze scriptie proberen aan te tonen dat deze objecten, naast het verzegelen van goederen, ook nog een persoonlijke waarde voor hun eigenaren hadden.

De meeste zegels zijn gemaakt van steatiet, een zachte steensoort. Dit gesteente is niet te vinden op het eiland zelf, en dus waarschijnlijk geïmporteerd. Een ander veelvoorkomend materiaal is schelp, maar ik ben van mening dat deze objecten niet als zegels gebruikt zijn, deze worden namelijk vooral gevonden in graven. Enkel de schelpen zegels gevonden in de graven hebben een ingekraste decoratie, de schelpen zegels die in het dorp gevonden zijn, hebben dit niet. Ook zijn er geen verzegelingen aangetroffen in het dorp die gemaakt zijn met een schelpen zegel. Dit maakt het aannemelijk dat de schelpen objecten die zijn geclassificeerd als zegels, niet echt als zegels gebruikt zijn, maar eerder als ornament, of misschien zelfs als een vervanging van de stenen zegels in het graf.

In de nederzetting zijn een paar gebouwen waar duidelijk meer zegels, en ook vaak veel verzegelingen gevonden zijn. Opvallend is dat deze gebouwen aan de brede straat in het centrum van het dorp liggen. Hieruit zou men dus kunnen concluderen dat de opslagruimten van het dorp in het centrum lagen.

In het grafveld zijn in vergelijking met de nederzetting weinig zegels gevonden. Dit zou kunnen betekenen dat het niet gebruikelijk was om een zegel mee te begraven met de overledene, maar, bijvoorbeeld, de zegel als een erfstuk te houden. Deze theorie wordt ondersteund door voorbeelden uit het dorp waar meerdere stijltypen samen worden gevonden. Daarnaast zijn er in de nederzetting zegels gevonden die zijn gerepareerd of zijn herbewerkt. Hier uit zou men af kunnen leiden dat de zegels geen wegwerpartikelen waren, maar dat ze lang in gebruik waren, en dat er redelijk zuinig mee omgegaan werd.

Mijn conclusie is dan ook, dat de zegels als primaire functie het verzegelen van goederen hadden, maar dat zij daarnaast ook een persoonlijke waarde hadden voor de eigenaren van de zegels.

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