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## **Goods Placement in Predynastic Burials: A Case Study from the Cemeteries in the Naqada Region**

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### **Introduction**

The studies of burial customs of the Naqada Culture in the 4<sup>th</sup> Millennium BC allow tracing social development which influenced the emergence of the Early State (Fig. 1). Burials of the Naqada Culture were first discovered in the cemeteries at Naqada during 1894-95 by Petrie (Petrie and Quibell 1896). Subsequently more than 200 cemeteries have been excavated or surveyed to date (Hendrickx and van den Brink 2002). Through these investigations, typical and regulated mortuary characteristics have been observed. The contracted posture of burials with the head directed south and face directed west, or quantitatively wealthy and varied burial equipment, are typical characteristics of Upper Egyptian burial custom (e.g. Castillos 1982). Quantitative analyses of burial equipment have contributed to the understanding of social stratification (e.g. Bard 1994).

Despite recent research into Predynastic mortuary customs, many aspects remained unsolved. The placement of goods in burials is one such example, and is investigated here to better understand mortuary regulations and practices. Four cemeteries in the Naqada region of Upper Egypt are the subject of this analysis, since the Naqada region embraces a relatively large amount of documented graves, which are recorded in archival field notes and publications (Baumgartel 1970; Petrie and Quibell 1896).



Fig. 1. Predynastic cemeteries along the Nile

## 1. Research background

### *1.1. Mortuary archaeology in Predynastic research – a brief summary*

The investigation of mortuary practices is one of the common research themes applied to the Naqada Culture. Many aspects such as the classification of tombs or style of interment were examined in the early-twentieth century (Murray 1956; Petrie 1920; Reisner 1936).

After the 1980s, research into Predynastic social stratification became more frequent. One landmark example is the study by Bard (1994) who conducted a cluster analysis for the Cemetery 1400-1500 at Armant and three cemeteries (Main, B, and T) at Naqada. Its results suggest the complexation of social stratum after mid-Naqada II.

From the mid-1990s, Predynastic mortuary archaeology diversified due to the increase of information from new interdisciplinary excavations such as at Hierakonpolis (Friedman 2008). In addition, developments in methods and theory applied to mortuary archaeology enabled the investigation of new questions (cf. Parker Pearson 1999). For example, Jones (2007) analysed body manipulation in Hierakonpolis HK 43 Cemetery which was possible due to the human remains which were carefully retrieved with modern excavation techniques. Further, social identity and relationships in the Predynastic were discussed by Stevenson (2009a; 2009b) who analysed the field records of the excavation of the el-Gerzeh cemetery.

Despite numerous studies applying various theoretical perspectives and methodological approaches, there are still obscurities regarding Predynastic burials. More research based on detailed observation, analysis, and interpretation are necessary. Furthermore, re-evaluation of old excavations through archival records can also contribute to the unsolved points under discussion. Predynastic burial goods placement is one such point.

### *1.2. Past research on the goods placement in burial*

Since interred goods closely relate to the buried person, understanding goods placement in burials is important to observe mortuary regulations. However, for the Naqada Culture, detailed research has not been adequately attempted except in some examples. There are two directions in past research referring to goods placement. One is the placement of particular goods type, and the other is the general description of the well preserved graves. As an example of the former,

Regner (1996) gathered the information on the placement of palettes in the Predynastic graves. Examples of burials in Lower and Upper Egypt were analysed and it was found that palettes were widely distributed around the buried person, especially around the head, hands, and pelvis. Furthermore, Roth (1992) studied the placement of fish-tailed knives in burial to examine the functional and historical relationship with the Dynastic psš-kf knives which were used for the 'Opening of the mouth ritual'.

For the latter case, general descriptions of the typical goods placement in well preserved graves are mentioned in many works. The oldest known example from Predynastic Egypt is the report on the observed placement regulations in the cemeteries at Naqada (Petrie and Quibell 1896). Since then, some books mention the typical goods placement and its development (e.g. Adams 1988: 17). Grajetzki (2003) mentioned typical Predynastic goods placement in comparison with Dynastic mortuary customs.

Contrary to the examples in the above overview, the fragmentary state of detailed information prevents macroscopic analyses into the comprehension of goods placement by cemetery. This paper aims to overcome this issue by integrating published and unpublished information sources.

## 2. Materials and methods

### 2.1. Research area and cemeteries to be analysed

For the analysis of burial goods placement, four cemeteries in the Naqada region were chosen. These are three cemeteries at Naqada (Main (NM), B (NB), and T (NT)) excavated by Petrie and his team (Petrie and Quibell 1896), and the cemetery in Deir el-Ballâs (Bâllas North (BN)) excavated by Lythgoe (Podzorski 1994) as part of the Hearst Expedition. Other Predynastic and Early Dynastic cemeteries were found in this area such as Ballas excavated by Quibell (Petrie and Quibell 1896) on the west bank of the Nile, or Khizam (e.g. Hendrickx 1992) on the east. However, the records of these cemeteries are too fragmentary for the current analysis<sup>1</sup>.

Though the published reports of the cemeteries at Naqada contain only partial records of graves and no final reports were published for BN, unpublished records

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<sup>1</sup> Archaeological sites in the Naqada region are listed by Hendrickx and van den Brink (2002).

of these cemeteries are fortunately preserved in museums. The supplements for Petrie's excavations by Baumgartel (1970) and Payne (1989) provide the list of the interred goods per grave, which are stored in museums<sup>2</sup>. Sketches of grave plans are lacking, but some exist in Petrie's notebooks which are now held by the Petrie Museum of Egyptian Archaeology, University College London. Therefore, for Petrie's excavations, the analysis of goods placement is possible<sup>3</sup>.

For BN, Podzorski (1994) comprehensively integrated the field records, and objects information held in Phoebe A. Hearst Museum of Anthropology of University of California, Berkeley, and other places. Grave plans of each burial were presented, which makes the analysis possible for BN.

## 2.2. *Methods of analysis of goods placement in burial*

The analytical methodology used here is based on the works of Regner (1996) and Stevenson (2013). These authors used 10 areas for goods placement around the body, however the area around the body is divided into 14 areas here, encompassing around the buried person and along the grave outline (Fig. 2, Table 1).

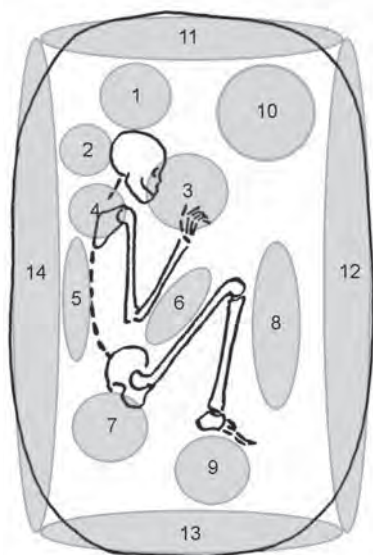


Fig 2. Model of placement areas in Predynastic burial (Regner 1996 Abb. 39, modified)

<sup>2</sup> Information in the catalogues of three museums (e.g. Regner 1996) whose information had not been combined in Baumgartel's list were integrated.

<sup>3</sup> Unfortunately, the field notes that survive cover less than half of the excavated graves.

Goods were counted by type by placement area. The goods consisted of 7 different types: pottery, stone vessels (SV), stone artefacts (SA), palettes, beads/pendants (B/P), ivory, and shells. Other unlisted goods are included in 'miscellaneous'. In the case of analysis for the cemeteries at Naqada, only goods discernible in the Petrie's notebooks were counted. The supplementary lists of Baumgartel and Payne were also crosschecked during this counting. For BN, the author followed Podzorski's descriptions.

Table 1. Placement area for burial

No.	Description
1	Above head
2	Behind head
3	In front of face and around hands
4	Neck and shoulder
5	Behind back
6	Before body, between arms and upper legs
7	Around pelvis
8	In front of legs
9	Below feet
10	Before upper body
11	Along grave outline above head
12	Along grave outline before face
13	Along grave outline below feet
14	Along grave outline behind back

### ***2.3. Timeframe and selection of tombs***

Based on the pottery typology and its seriation, the relative chronological timeframe of the Naqada Culture was suggested by various authors such like Petrie (1920), Kaiser (1957), and Hendrickx (2006). Payne (1992) also proposed a local chronology at Naqada. Hendrickx's chronology is used here, merged it to four periods: Naqada I, Early Naqada II, Late Naqada II and Naqada III. This modification aimed to include as many graves as possible, particularly those with a wider chronological range, and to facilitate the diachronic observation. Under this chronological setting, graves with exact or almost exact chronological position were selected, and not all of the graves were analysed as a consequence.

### 3. Results

Tables 2 to 5 show the amount of goods from each chronological phase, with the sum and percentage of each goods type by placement area, separated by cemetery. The sum of each good type by cemetery is also provided.

#### 3.1. *Naqada I (Table 2)*

*Pottery:* Most potteries were placed along the grave outline, especially in areas 11 and 12. Contrarily, some pottery was also placed around the body, especially in areas 1, 3, 5 and 6. These results could be seen at NM and BN, but the number of goods per area at BN were max. 4 or 5 (area 11 or 12). Therefore, it is too small for evaluation for BN. NB shows a similar pattern in the dominant placement along the grave outline, but few potteries were placed around the buried person.

*SV:* Amounts are few in all cemeteries but they tended to be placed around the buried person, especially in areas 1 and 6 at NM and BN.

*SA:* No flint lithics could be identifiable at NB and BN. In NM, flint lithics were placed both around the buried person and along the grave outline. The amount in the latter area is slightly larger than that of the former, but evaluation is difficult due to the small number of flint lithics.

*Palette:* No palettes were identified at NB. Palettes were placed around the buried person and along the grave outline at NM, but the former placement area was dominant. Three palettes in area 7 should be mentioned. At BN, a sole example was also placed near the buried person in area 6.

*B/P:* No goods could be identifiable at NB and BN. At NM, B/P were placed in both near the buried person and grave outline, but the former areas occur in a higher proportion than the latter. B/P were also dispersed in areas 3, 5, 6 and 9.

*Ivory:* No ivory goods could be identifiable at NB and BN. At NM, area 3 was the dominant placement (72.4 %, 21 objects). Also, there were 6 objects in area 1.

*Shell:* Mainly placed near buried person in areas 1, 3 and 6 at NM and BN. At NB a sole example was placed in the step part of the grave.

#### 3.2. *Early Naqada II (Table 3)*

*Pottery:* Most of the pottery were placed along the grave outline. This could be identified at NM, NB and BN, but was obscure at NT. Pottery were also confined around the buried person in this period, in particular at NM in areas 1, 3, 6, 8 and 9, while they were dominant in areas 6 and 9 in NB and 3, 6 and 9 at BN.

*SV:* No stone vessels could be identified at NT. The placement along the grave outline is observed at NM. Several stone vessels at NM were observed in areas 3





8	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
9	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
10	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
11	3	33,3%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	1	33,3%	0	0,0%
12	1	11,1%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
13	1	11,1%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
14	2	22,2%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
Step	0	0,0%	1	100,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	1	100,0%	0	0,0%	0	0,0%	0	0,0%
Total	9		1		0		0		0		0		1		0		1		3	

BN N = 5

Area	Pottery	SV	SA	Palette	B/P	Ivory	Shell	Miscellaneous
1	0	0,0%	0	0,0%	0	0,0%	0	0,0%
2	0	0,0%	0	0,0%	0	0,0%	0	0,0%
3	0	0,0%	0	0,0%	0	0,0%	1	33,3%
4	1	8,3%	0	0,0%	0	0,0%	0	0,0%
5	0	0,0%	0	0,0%	0	0,0%	0	0,0%
6	1	8,3%	1	100,0%	0	0,0%	2	66,7%
7	0	0,0%	0	0,0%	0	0,0%	0	0,0%
8	0	0,0%	0	0,0%	0	0,0%	0	0,0%
9	0	0,0%	0	0,0%	0	0,0%	0	0,0%
10	0	0,0%	0	0,0%	0	0,0%	0	0,0%
11	4	33,3%	0	0,0%	0	0,0%	0	0,0%
12	5	41,7%	0	0,0%	0	0,0%	0	0,0%
13	0	0,0%	0	0,0%	0	0,0%	0	0,0%
14	1	8,3%	0	0,0%	0	0,0%	0	0,0%
Total	12		1		0		3	

\* No data for NT

Table 3. Placement of the goods in burial in Early Naqada II (SV = stone vessel, SA = stone artefact, B/P = beads/pendants)

NM N = 148

Area	Pottery	SV		SA		Palette		B/P		Ivory		Shell		Miscellaneous		
1	30	2,9%	0	0,0%	0	0,0%	2	3,9%	3	14,3%	8	11,1%	2	13,3%	1	1,5%
2	3	0,3%	0	0,0%	0	0,0%	3	5,9%	3	14,3%	17	23,6%	0	0,0%	6	9,2%
3	17	1,7%	3	12,5%	5	21,7%	17	33,3%	7	33,3%	14	19,4%	10	66,7%	12	18,5%
4	0	0,0%	0	0,0%	0	0,0%	0	0,0%	1	4,8%	0	0,0%	0	0,0%	0	0,0%
5	7	0,7%	0	0,0%	0	0,0%	1	2,0%	0	0,0%	0	0,0%	0	0,0%	1	1,5%
6	16	1,6%	6	25,0%	2	8,7%	4	7,8%	3	14,3%	7	9,7%	0	0,0%	8	12,3%
7	4	0,4%	0	0,0%	2	8,7%	1	2,0%	0	0,0%	0	0,0%	0	0,0%	1	1,5%
8	16	1,6%	0	0,0%	1	4,3%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
9	33	3,2%	1	4,2%	3	13,0%	2	3,9%	0	0,0%	3	4,2%	0	0,0%	5	7,7%
10	54	5,2%	0	0,0%	0	0,0%	3	5,9%	0	0,0%	1	1,4%	0	0,0%	2	3,1%
11	332	32,2%	5	20,8%	0	0,0%	6	11,8%	3	14,3%	13	18,1%	1	6,7%	10	15,4%
12	287	27,9%	1	4,2%	0	0,0%	2	3,9%	1	4,8%	0	0,0%	0	0,0%	2	3,1%
13	146	14,2%	8	33,3%	5	21,7%	7	13,7%	0	0,0%	8	11,1%	2	13,3%	6	9,2%
14	63	6,1%	0	0,0%	5	21,7%	2	3,9%	0	0,0%	0	0,0%	0	0,0%	9	13,8%
Recess	21	2,0%	0	0,0%	0	0,0%	1	2,0%	0	0,0%	1	1,4%	0	0,0%	2	3,1%
Step	1	0,1%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
Total	1030		24		23		51		21		72		15		65	

NB N = 7

Area	Pottery	SV		SA		Palette		B/P		Ivory		Shell		Miscellaneous		
1	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0	0	0,0%	0	0,0%
2	1	1,2%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0	0	0,0%	0	0,0%
3	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0	0	0,0%	0	0,0%
4	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0	0	0,0%	0	0,0%

5	2	2,5%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0	0,0%	0	0,0%
6	4	4,9%	0	0,0%	1	50,0%	0	0,0%	0	0,0%	0	0	0,0%	0	0,0%
7	1	1,2%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0	0,0%	0	0,0%
8	2	2,5%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0	0,0%	0	0,0%
9	4	4,9%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0	0,0%	0	0,0%
10	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0	0,0%	1	20,0%
11	15	18,5%	1	50,0%	0	0,0%	1	50,0%	0	0,0%	0	0	0,0%	0	0,0%
12	26	32,1%	1	50,0%	0	0,0%	0	0,0%	0	0,0%	0	1	100,0%	0	0,0%
13	21	25,9%	0	0,0%	0	0,0%	1	50,0%	0	0,0%	0	0	0,0%	2	40,0%
14	5	6,2%	0	0,0%	1	50,0%	0	0,0%	0	0,0%	0	0	0,0%	2	40,0%
Total	81		2		2		2		0		0	1		5	

NT N = 2

Area	Pottery		SV		SA		Palette		B/P		Ivory		Shell		Miscellaneous	
1	2	5,7%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
2	0	0,0%	0	0,0%	0	0,0%	1	33,3%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
3	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
4	0	0,0%	0	0,0%	2	100,0%	1	0,0%	0	0,0%	0	0,0%	0	0,0%	1	20,0%
5	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
6	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
7	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
8	1	2,9%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
9	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
10	19	54,3%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
11	11	31,4%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	2	100,0%	0	0,0%	4	80,0%

12	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
13	1	2,9%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
14	1	2,9%	0	0,0%	0	0,0%	1	33,3%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
Total	35		0		2		3		0		2		0		5	

BN N = 21

Area	Pottery		SV		SA		Palette		B/P		Ivory		Shell		Miscellaneous	
1	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
2	0	0,0%	0	0,0%	0	0,0%	0	0,0%	4	57,1%	0	0,0%	0	0,0%	1	12,5%
3	7	7,9%	0	0,0%	0	0,0%	2	20,0%	1	14,3%	1	25,0%	0	0,0%	3	37,5%
4	0	0,0%	0	0,0%	0	0,0%	0	0,0%	1	14,3%	0	0,0%	0	0,0%	0	0,0%
5	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
6	3	3,4%	0	0,0%	0	0,0%	1	10,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
7	0	0,0%	0	0,0%	0	0,0%	3	30,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
8	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	1	12,5%
9	2	2,2%	0	0,0%	3	100,0%	2	20,0%	1	14,3%	3	75,0%	3	37,5%	1	12,5%
10	2	2,2%	0	0,0%	0	0,0%	1	10,0%	0	0,0%	0	0,0%	0	0,0%	1	12,5%
11	24	27,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	5	62,5%	0	0,0%
12	40	44,9%	1	100,0%	0	0,0%	1	10,0%	0	0,0%	0	0,0%	0	0,0%	1	12,5%
13	11	12,4%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
14	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
Total	89		1		3		10		7		4		8		8	

and 6 and also in 11 and 13. At NB and BN, no stone vessels were placed around the buried person but only along the grave outline.

*SA:* Objects were placed around the buried person and along the grave outline. The amount of the flint lithics at NM became larger, and dispersed in various areas (3, 6, 7, 8 and 9). In other cemeteries, flint lithics were placed in areas 4 in NT, 6 at NB and 9 at BN.

*Palettes:* Palettes in NM could be both around the buried person and along the grave outline, but compared to Naqada I, an increase in area 3 was recorded. However, in the other cemeteries the placement areas differ. Dominant placement around the buried person occurred at NT and BN. By contrast, palettes were placed along the grave outline at NB (areas 11 and 13).

*B/P:* No goods could be identified at NB and NT. At NM and BN, most of the B/P were placed in various areas around the buried person, similar to Naqada I.

*Ivory:* No goods could be identified at NB. At NM, though the dominant number around the buried person were similar to that from Naqada I, placement along the grave outline also increased especially in areas 11 and 13. Placement at NT was only in area 11 and at BN was separated from the buried person.

*Shell:* Compared to Naqada I, placement in area 3 increased. Placements in other areas continued, but along the grave outline became dominant at BN.

### **3.3. Late Naqada II (Table 4)**

*Pottery:* Similar to Early Naqada II, most were placed along the grave outline. This was identifiable at NM, NB, and BN, however the increase in areas 9 and 10 is noticeable, except at BN. The placement around the buried person confirmed in this period but pottery slightly decreased in number in areas 3, 5, 6 and 7. The placement areas with several potteries were divergent and increased at NM in areas 1, 2, 3, 6, 8, 9 and 10. Similar results are observed between NM, NB, and NT, but goods along the grave outline was common at BN.

*SV:* No stone vessels could be identified at BN. The result was similar to that of Early Naqada II, and increasing utilisation of area 10 is noticeable at NM. At NT the pattern was similar to NM where objects were more dominant around the buried person than along the grave outline. Small numbers of stone vessels made it difficult to observe any pattern at NB.

*SA:* No flint lithics could be identifiable at BN. In contrast to Early Naqada II, the dominant placement areas were along the grave outline (areas 11 and 12) at NM. But at NM, flint lithics were also placed around the buried person, especially in areas 3, 6, 9 and 10. It was also common at NB (area 9) and NT (area 3).



3	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
4	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
5	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
6	1	0,7%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
7	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
8	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
9	18	11,8%	0	0,0%	2	100,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	1	100,0%
10	18	11,8%	1	50,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
11	29	19,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
12	31	20,3%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
13	30	19,6%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
14	23	15,0%	1	50,0%	0	0,0%	2	100,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
Total	153		2		2		2		0		0		0		1	

NT N = 13

Area	Pottery	SV	SA	Palette		B/P		Ivory	Shell		Miscellaneous			
1	12	3,1%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	1	50,0%	0	0,0%
2	1	0,3%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
3	2	0,5%	5	41,7%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
4	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
5	7	1,8%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
6	0	0,0%	3	25,0%	0	0,0%	1	16,7%	0	0,0%	0	0,0%	1	12,5%
7	6	1,6%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	1	12,5%
8	1	0,3%	0	0,0%	0	0,0%	1	16,7%	0	0,0%	0	0,0%	0	0,0%
9	99	25,8%	1	8,3%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%

10	48	12,5%	1	8,3%	0	0,0%	2	33,3%	0	0,0%	1	50,0%	1	50,0%	4	50,0%
11	32	8,3%	1	8,3%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
12	69	18,0%	1	8,3%	0	0,0%	1	16,7%	1	100,0%	1	50,0%	0	0,0%	1	12,5%
13	76	19,8%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
14	31	8,1%	0	0,0%	0	0,0%	1	16,7%	0	0,0%	0	0,0%	0	0,0%	1	12,5%
Total	384		12		3		6		1		2		2		8	
BN	N = 9															
Area	Pottery	SV	SA	Palette	B/P	Ivory	Shell	Miscellaneous								
1	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
2	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
3	0	0,0%	0	0,0%	0	0,0%	1	100,0%	0	0,0%	0	0,0%	0	0,0%	2	50,0%
4	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
5	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
6	2	4,2%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
7	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
8	2	4,2%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
9	2	4,2%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
10	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
11	11	22,9%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
12	17	35,4%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	1	25,0%
13	8	16,7%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
14	1	2,1%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
Step	5	10,4%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	1	25,0%
Total	48		0		0		1		0		0		0		4	



*Palettes:* Compared to Early Naqada II, the number in area 3 decreased, though the number in other areas did not change markedly. Similar placement occurred at NT but the results were obscured at NB and BN due to the small sample size.

*B/P:* No B/P could be identifiable at NB and BN. At NM, the amount of B/P was small but occurred both around the buried person (area 1) and along the grave outline. At NT the sole example was placed in area 12.

*Ivory:* No ivory was identified at NB and BN. Though the placement along the grave outline could be observed at NM, most were distributed around the buried person, particularly in areas 1, 2 and 6. However, the case at NT was different and ivory were placed in either area 10 or 12.

*Shell:* No shell was identified at NB and BN. In NM and BN, shells tended to be placed around the bodies, especially in areas 1, 3 and 4, but 1 example was observed in area 10.

### 3.4. Naqada III (Table 5)

*Pottery:* Similar to Late Naqada II, most of the pottery were placed along the grave outline or slightly separated in particular areas such as 9 or 10. This was observed at NM, NT, and BN. At NB, no pottery was placed around the buried person but in several cases were placed along the grave outline as such in area 11.

*SV:* No stone vessels could be identified at NB. The result was similar to Late Naqada II, but the frequency of stone vessels around the buried person decreased at NM and NT. At BN, SV were placed in areas 7, 8, 10, and 11, contrary to the total absence in previous period.

*SA:* No flint lithics were identified from any cemetery.

*Palettes:* No palettes were identified at NB. Palettes at BN were spread widely around the buried person and along the grave outline. However, in other areas, particularly area 6, were dominant at BN. Placement at area 4 was common at NM. However, at NT, a palette was identified in area 11.

*B/P:* No B/P could be identified at NB and NT. BP was placed around the buried person, especially in area 1 at NM, and 6 and 7 at BN.

*Ivory:* The only ivory was identified at BN where it was in areas 9 and 11.

*Shell:* No shell was identified from any cemetery.

### 3.5. Summary of the results

The following patterns for the placement by goods type appeared:

Pottery was placed both around the buried person and along the grave outline through all periods, though the goods along the grave outline were generally





11	18	18,9%	0	0,0%	0	0,0%	1	100,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
12	21	22,1%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
13	9	9,5%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
14	18	18,9%	2	100,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
Total	95		2		0		1		0		0		0		0	

BN N = 164

Area	Pottery	SV	SA		Palette		B/P	Ivory	Shell		Miscellaneous	
1	16	2,6%	0	0,0%	1	5,6%	0	0,0%	0	0,0%	0	0,0%
2	3	0,5%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
3	17	2,8%	0	0,0%	1	5,6%	0	0,0%	0	0,0%	2	6,9%
4	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
5	6	1,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
6	13	2,1%	0	0,0%	8	44,4%	1	50,0%	0	0,0%	4	13,8%
7	16	2,6%	2	40,0%	2	11,1%	1	50,0%	0	0,0%	11	37,9%
8	5	0,8%	1	20,0%	1	5,6%	0	0,0%	0	0,0%	0	0,0%
9	30	4,9%	0	0,0%	0	0,0%	0	0,0%	1	50,0%	2	6,9%
10	46	7,5%	1	20,0%	3	16,7%	0	0,0%	0	0,0%	3	10,3%
11	157	25,7%	0	0,0%	0	0,0%	0	0,0%	1	50,0%	4	13,8%
12	155	25,4%	1	20,0%	2	11,1%	0	0,0%	0	0,0%	1	3,4%
13	93	15,2%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	1	3,4%
14	48	7,9%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
Step	6	1,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	1	3,4%
Total	611		5		18		2		2		29	

dominant. Minor placement areas tended to be observed in the cemetery composed of many graves such as NM. This probably reflects the presence of burial with slight deviation from mortuary regulations about pottery placement.

Stone vessels were placed around the buried person through all periods, but from Early Naqada II they were also along the grave outlines. From Late Naqada II, their placement differentiated by cemetery. For example, areas separated from the buried person (9 and 10) and along the grave outline became dominant at NM, but the dominant goods were still placed around the bodies at NT.

Flint lithics were placed both around the buried person and along the grave outline, but the dominant area changed by period. In Early Naqada II, dominant placement was around the buried person, though in Naqada I and Late Naqada II, that was along the grave outline.

Palettes were also placed in both areas around the bodies and along the grave outline, but latter areas did not change much aside from minor differences.

Beads and pendants were small number, and it is difficult to indicate the tendency of placement. However, they were frequently found around the body.

Ivory and shells were generally placed around the bodies. For ivory, areas 3 and 6 were especially dominant areas for placement in Naqada I, but after Early Naqada II placement in areas 9 and 10 also occur. For shells, after Late Naqada II, the placement along the grave outline is also observed.

The results show the diversity of placement by goods type, but strong differences by cemetery was not observed. Tendency of the goods placement in burial was generally similar in the Naqada region.

## 4. Discussion

### 4.1. *The evaluation of patterns of goods placement by type*

At first, it can be considered that the placement area of the goods reflects the function the goods originally had. For example, B/P, ivory, or shell tended to be placed around the buried person as a reflection of ornamental function. Such functional reflection can also be seen in the case of pottery and stone vessels. Pottery was placed around the buried person and along the grave outline. Large storage vessels such as Petrie's R81 or R84 (Petrie and Quibell 1896: pl. 38) were placed along the grave outline, but small pottery tended to be placed around the buried person. The tendency of stone vessel placement around the buried person seems to concur with previous observations by Adams (1988). Certainly, this

pattern relates to their relative rarity and social meaning connected to the status of the person. Unlike the other object types, it is difficult to recognise the same principle for placement of flint lithics and palettes. According Roth (1992) their placement area was spread around the buried person. This argument is partially confirmed in this analysis, but microscopic analysis of individual lithic tool types is necessary for further insight. The tendency and meaning of the placement of palettes was discussed by Baduel (2008), and the result of this analysis generally follows the results of that study. According to Baduel, palettes functioned as adornments in Naqada I, but in Naqada III their function changed into a similar category as pottery. It is suggested that this change was affected by the evolution of make-up practices such as the emergence of the make-up box. From the analysis in this paper, a similar pattern of palette placement is suggested. However, due to the reduction of burial activity in the Naqada III period at Naqada, more evidence is required to support the suggestion of Baduel.

#### ***4.2. The possible reasons for the difference of goods placement between periods and cemeteries***

Differences in the placement of goods were observed between periods, though not to a necessarily large degree. One of the reasons is the enlargement of the average grave volume in the later Naqada periods (cf. Castillos 1982). Larger graves provided more room for burial goods. The increase of the pottery in areas 9 and 10 strongly relates to larger grave volume. Therefore, in later Naqada periods, interring the dead with a large amount of pottery seemed to have importance as a mortuary custom. Contrary to the increased frequency of pottery, the amount of other goods types such as stone vessels, flint lithics, beads and pendants, or palettes did not drastically change. Instead of a change of frequency in these objects, their significance may have been that they form a set of material culture with which people were interred. Mortuary practice changed between periods, as demonstrated by the possible change of palette function, even if the range of material culture included in burials did not.

It can be suggested that objects interred with the dead did not only perform the role of sustaining them in the afterlife (Reisner 1936), but also as a demonstration of social status connected to those placing the grave goods. Aside from the general similarity of goods placement among four cemeteries from the analysis in this paper, minor differences of goods placement which also appeared in the results may indicate the subtle mortuary customs between the cemeteries.

## 5. Concluding remarks

Only the broad understanding of the meaning and function of goods or burial equipment could be suggested through the analysis of the pattern of the goods placement in burials. For further study, analyses by more refined categories such as size of vessel, lithic tool types, or other attributes may provide further insights. An object-based approach is also useful for investigating the burial contents and characteristics. Comparison with the recent excavations at Abydos or Hierakonpolis may enable the interpretation of other minor aspects of Predynastic mortuary practices. The re-evaluation of old excavations may also provide another avenue to contribute to Predynastic mortuary research.

It is undeniable that the graves and grave goods analysed in this paper are highly affected by natural and artificial post depositional process. Many beads and pendants, ivory, and shells could not be identified from notebooks, since small objects can easily move and be affected by the plundering and disturbance of the graves. This problem is difficult to overcome, but the reconstruction of post depositional process as part of site formation process (Schiffer 1972) may help the analysis of goods placement.

Predynastic burials are not only the evidence of social stratification, but also mortuary activity by people in the Predynastic. Macroscopic and microscopic analysis allow to reconstruct more detailed Predynastic mortuary aspects as the archetype of Dynastic mortuary customs.

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