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DEMOGRAPHIC ANALYSIS OF MULTIPLE AND CLUSTERED BURIALS AT WADI QITNA, EGYPTIAN NUBIA

ABSTRACT — Demographic data were used to decipher the significance of two different types of joint burials, which have occurred in the tumuli cemetery at Wadi Qitna in more than half of the burials. Ten empirical types of multiple burials, arranged into three interpretative types, expressed exclusively relations among members of a monogamous family. Small tumulus clusters, showing 12 empirical types transformed into five interpretative types, as well as large tumulus clusters, brought additional evidence for the existence of polygamous unions as well as for sequences of more nuclear families spanning over generations and including collateral relationships. Moreover, it has been proved that multiple burials were mostly successive, simultaneous deaths being rare. The curious dominance of females over males could be explained by polygamy, a characteristic feature of the whole population and especially of the burials in tumulus clusters.

KEY WORDS: Demography — Multiple Burials — Clustered Burials — Successive Burials — Simultaneous Burials — Monogamy — Polygamy — Minimum Lineage.

INTRODUCTION

A vast tumulus cemetery located in a tributary valley called Wadi Qitna on the left bank of the Nile 65 km south of Aswan, west of the village Nag Wadi Siyala el-Gibli, was discovered by the Nubian expedition of the Czechoslovak Institute of Egyptology in 1964 and excavated in its whole extent a year later. It consisted of 520 tumuli, out of which 15 were damaged to such an extent that they could not provide any archaeological or anthropological information, and of 56 non-funeral structures. According to the character of archaeological finds the cemetery represented a peripherial variant of the Ballana (X-Group) culture and was in use from the second half of the 3rd up to the end of the 5th century A.D. In its tumuli were buried the inhabitants of a non identified village, living peacefully as farmers, herdsmen and craftsmen, probably of Nobadian ethnicity (Strouhal, 1984a).

TYPES OF JOINT BURIALS

A peculiar feature of the cemetery was the tendency of the burials to join either in the same burial chambers (multiple burials) or by coalescence of several graves (tumuli clusters), eventually in the combination of both forms (*Tab. 1*). Of the 505 investigated tumuli, 92 (18.2 %) contained burials of two to four persons, altogether 197 individuals (32.3 % of the total of 558 persons identified in the tombs, and another 51 persons reconstructed according to the dimensions of burial chambers of graves, devoid of human remains by the robbers). Of the 520 tumuli of the cemetery, 176 (33.8 %) formed 53 tumulus clusters, consisting of two to sixteen tumuli. In them, 211 individuals (34.6 % of the total buried in the cemetery) were lain. Of them 82 (13.5 % of the total) joined in the same time in multiple burials. The remaining 344 tumuli (66.2 %) contained single burials, altogether 283 persons(46.5 % of the total).

TABLE 1. *Frequency of individuals in different types of burials*

Sex	Age	1. Single burials in single tumuli		2. Multiple burials in single tumuli and tumulus clusters		3. Single and multiple burials in tumulus clusters		4. Multiple burials in tumulus clusters		5. Total*	
		n	%	n	%	n	%	n	%	n	%
—	0—1	49	46.7	27	25.7	40	38.1	11	10.5	105	100.0
	2—6	18	31.0	20	34.5	29	50.0	9	15.5	58	100.0
	7—14	19	32.2	30	50.8	28	47.5	18	30.5	59	100.0
	Sum	86	38.7	77	34.7	97	43.7	38	17.1	222	100.0
M	15—19	5	31.3	9	56.3	5	31.2	3	18.7	16	100.1
	20—29	37	51.4	25	34.7	19	26.4	9	12.5	72	100.0
	30—39	36	64.3	13	23.2	10	17.9	3	5.4	56	100.0
	40—49	10	55.6	4	22.2	6	33.3	2	11.1	18	100.0
	50—59	1	25.0	2	50.0	1	25.0	—	—	4	100.0
	Sum	89	53.6	53	31.9	41	24.7	17	10.2	166	100.0
F	15—19	12	52.2	7	30.4	7	30.4	3	13.0	23	100.0
	20—29	33	47.1	25	35.7	21	30.0	9	12.9	70	99.9
	30—39	39	48.1	27	33.3	28	34.6	13	16.0	81	100.0
	40—49	12	46.2	5	19.2	11	42.3	2	7.7	26	100.0
	50—59	—	—	—	—	2	100.0	—	—	2	100.0
	Sum	96	47.5	64	31.7	69	34.2	27	13.4	202	100.0
—	15—19	—	—	1	100.0	—	—	—	—	1	100.0
	20—59	12	66.7	2	11.1	4	22.2	—	—	18	100.0
	Sum	12	63.2	3	15.8	4	21.0	—	—	19	100.1
Total		283	46.5	197	32.3	211	34.6	82	13.5	609	99.9

Explanations: * = From the sum of types 1—3 type 4 has been substracted

TABLE 2. *Age and sex groups proportions in different types of burials*

Age and sex group	1. Single burials in single tumuli		2. Multiple burials in single tumuli and tumulus clusters		3. Single and multiple burials in tumulus clusters		4. Multiple burials in tumulus clusters		5. Total	
	n	%	n	%	n	%	n	%	n	%
Adult & juv. males	89	48.1	53	45.3	41	37.3	17	38.6	166	45.1
Adult & juv. females	96	51.9	64	54.7	69	62.7	27	61.4	202	54.9
Sum	185	100.0	117	100.0	110	100.0	44	100.0	368	100.0
Infants and children	86	30.4	77	39.1	97	46.0	38	46.3	222	36.5
Juveniles and adults*	197	69.6	120	60.9	114	54.0	44	53.7	387	63.5
Sum	283	100.0	197	100.0	211	100.0	82	100.0	609	100.0

Explanation: * = enlarged by inclusion of unsexed individuals (12 in 1., 3 in 2., 4 in 3. and 19 in 5.)

Thus more than half of the population (326 persons, 53.5 % of the total) belonged into both types of joint burials.

To explain this unusual situation we took into consideration the individual demographic data and we learned that children showed the greatest accumulation in both types of joint burials (136; 61,3 % of their total), especially between 2—14 years of age.

The share of females in joint burials (106; 52.5 %) was only slightly less than the share of the whole population, and this tendency was more expressed in adults than in juveniles. The smallest share in joint burials was shown by males (77; 46.4 %), especially in the 30—39 age period. Such order would be expected in related persons bound by emotional ties.

The demographic composition of the cemetery as a whole (Strouhal, 1986 a, b) is characterized by an unusual dominance of females over males (*Tab. 2*). Comparing the individual types of burials we may see that single burials show a lesser female dominance, all multiple burials show the same dominance as the whole population, but the burials in tumulus clusters, comprising also multiple burials in clusters, a still bigger dominance.

A similar picture emerges from the comparison of the share of children up to 14 years with adults starting from 15 years. There is a lesser share of children in single burials than in the whole cemetery; they have somewhat bigger share in multiple burials and their share is especially large in burials in tumulus clusters as well as in multiple burials in clusters.

MULTIPLE BURIALS

Out of a total of 92 multiple burials one could be determined only by the L-shape form of the burial chamber and its dimensions, as it was devoid of skeletal remains (tumulus 355); thus it cannot be used for a demographic analysis. The other 91 multiple burials can be divided according to demographic determination of the dead into ten empirical types (*Tab. 3*), each subdivided into *simultaneous* burials of dead, *successive* burials and burials with *indetermined timing*. The distribution into this specific subtypes could not be done by stratigraphic observations due to the destructive activity of tomb robbers, but it was possible to be reconstructed according to the dimensions of burial chambers, which were found closely dependent on the buried individual's age (Strouhal, 1984a: 90—92, tab. 20, fig. 93). If dimensions, especially the breadth of the burial chamber, were greater than the norm ($\overline{X} \pm s$) for the age of the respective dead, we may suppose that it had been constructed for a simultaneous burial of two or more bodies. In the case that the dimensions corresponded to the norm of one of the two or more dead, the burials were considered to had been lain successively, after an indeterminable period. If the age of two buried persons sufficiently differed (e.g. a child and an adult), it was even possible to judge for whom of them the burial chamber was built.

More than three-fourths of the burials were successive, only less than one-fifth simultaneous and the rest (4 cases) were indeterminable. From the total of burials which took part in the cemetery simultaneous burials represent only a small fraction (2.9 %), which can be explained by a "normal" incidence of simultaneous deaths of closely related persons with close contacts and therefore similar causes of death (e.g. child birth or current infections). No ritual killing of the survivors, great epidemics or battles have to be presumed.

Of the successive and not timed burials it was impossible to determine the order of the deceased in a half of the cases (50.3 %). In individuals with a great age difference it was possible to conclude that more often the older person was buried first (22.5 cases; 30.2 %), less often the younger one (14.5; 19.5 %). The first succession corresponds to the greater probability of death with the older people. Surprising is the relatively numerous incidence of opposite cases, in which into a tomb with a small burial chamber, constructed for a child or even for an infant, later an adult, juvenile or older child was pressed, obviously in a strongly flexed bound position.

From the demographic point of view the following empirical combinations were found in the multiple burials (*Tab. 3, Fig. 1*):

1. adult male and female, 2. adult male and female with one or two children, 3. two adult males, 4. two adult females, 5. two adult males with a female, 6. adult male and child with a big age difference, 7. adult male and child with a small age difference, 8. adult female and one or two children with a big age difference, 9. adult female and child with a small age diference, 10. two or three children.

TABLE 3. *Frequency of empirical types of multiple burials*

Empirical burial types	Simultaneous burials		Successive burials		Timing indetermined		Total	
	n	%	n	%	n	%	n	%
1. M + F	5	5.5	14	15.4	—	—	19	20.9
2. M + F + C (+C)	—	—	5	5.5	—	—	5	5.5
3. M + M	1	1.1	3	3.3	—	—	4	4.4
4. F + F	—	—	4	4.4	—	—	4	4.4
5. M + M + F	1	1.1	1	1.1	—	—	2	2.2
6. M + C'	2	2.2	8	8.8	—	—	10	11.0
7. M + C''	—	—	3	3.3	—	—	3	3.3
8. F + C (+ C)'	2.5+	2.7	24.5+	26.9	2	2.2	29	31.9
9. F + C''	—	—	1	1.1	—	—	1	1.1
10. C + C (+ C)	5	5.5	7	7.7	2	2.2	14	15.4
Total	16.5	18.1	70.5	77.5	4	4.4	91	100.1

Explanations: + = one triple burial (t. 112) was both simultaneous and successive
' = with a big age difference (< 15 years in males, > 11 years in females)
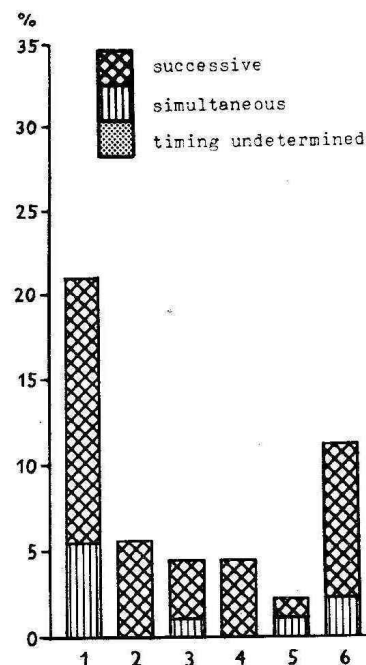'' = with a small age difference

FIGURE 1. *Empirical types of multiple burials subdivided into successive, simultaneous and indetermined.*

Some empirical types can be interpreted easily: No. 2 as parents with their children, No. 6 as fathers and their children, No. 8 as mothers and their children, No. 10 as infant brothers and sisters. They could be as such arranged in three interpretative types, viz A) parents and children, B) brothers and sisters and C) husbands and wives (*Tab. 4, Fig. 2*).

The interpretation of other types is more controversial. Not all male and female couples (type No. 1) can be considered husbands and wives. Because of the probable burials of two adult brothers (Nos. 3 and 5) and two adult sisters (No. 4), also the possibility of burials of adult brothers with sisters,

assessed as the double of the number of the mentioned brothers' and sisters' pairs, has to be taken into account (type B), only the rest being most probably husbands and wives (type C). Burials of fathers with adult or subadult daughters are less probable in view of the usually small age difference.
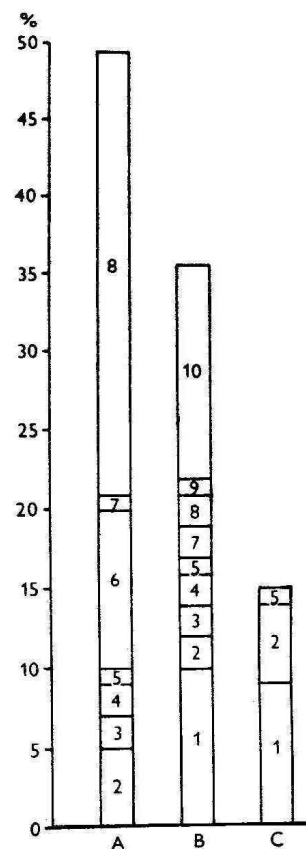
Types Nos. 3 and 4 have to be divided evently

FIGURE 2. *Interpretative types of multiple burials. A = parents with children, B = brothers and sisters, C — husbands and wives.*

TABLE 4. *Structure and frequency of interpretative types of multiple burials*

Empirical burial types	Interpretative burial types						Total	
	A. Parents with children		B. Brothers and sisters		C. Husbands and wives			
	n	%	n	%	n	%	n	%
1. M + F	—	—	10	9.9	9	8.9	19	18.8
2. M + F + C (+C)	5+	5.0	2++	2.0	5+	5.0	12	11.9
3. M + M	2	2.0	2	2.0	—	—	4	4.0
4. F + F	2	2.0	2	2.0	—	—	4	4.0
5. M + M + F	1+	1.0	1	1.0	1+	1.0	3	3.0
6. M + C'	10	9.9	—	—	—	—	10	9.9
7. M + C''	1	1.0	2	2.0	—	—	3	3.0
8. F + C (+C)'	29	28.7	2++	2.0	—	—	31	30.7
9. F + C''	—	—	1	1.0	—	—	1	1.0
10. C + C (+ C)	—	—	14	13.9	—	—	14	13.9
Total	50	49.5	36	35.6	15	14.9	101	100.2

Explanations: + = taken twice, because it belongs into both interpretative types
++ = added pairs of brothers and sisters contained in A type
' = with a big age difference (> 15 years in males, > 11 years in females)
'' = with a small age difference

between burials of two adult brothers (sisters), type B, and burials of fathers (mothers) with their sons (daughters), type A.

The rare type No. 5 was similarly divided, expressing on one hand a simultaneous burial of brothers with a sister (polyandry seems to be less probable, but successive burials of the husbands of a widow are also possible), on the other hand a husband with his wife and son, who died later (the other possibility enters into both types A and C).

Type No. 7 combines a juvenile or young adult male with older children or an unsexed juvenile. Two of these cases seem to be brothers and sisters (type B), a single burial could be of a father who died young with his child buried 11—16 years later (type A).

The similar type 9 contains only a single case, in which the burial chamber was built for a 7—8 year old child and later a 18—19 year old female was added. Even if she were buried very soon after the child, as his mother she would have given birth aged 10—11 years, which is normally impossible. Thus also this case can be entered in type B.

Of the resulting interpretative types, half share is taken as expected by type A, including mostly burials of mothers with their children (62 %) to a lesser extent burials of fathers with their children (26 %) and even less burials of both parents with children (12 %). This order expresses firstly the relatively different probability of death of each combination, in the same time, however, the big difference between the first two combinations results from the bigger emotional bond between mothers and children than between fathers and children.

Type B, occuring in more than one third of the cases, is composed of brothers and sisters of the infant, child and juvenile ages (58.3 %) and of the adult age (41.7 %).

Type C with the least frequency contains matrimonial couples buried either without (60 %) or with their children (40 %).

The analysis of multiple burials leads to the conclusion that this burial habit expresses close ties of relationship within the monogamous family.

SMALL TUMULUS CLUSTERS

From the methodological point of view tumulus clusters can be divided into the more frequent small clusters (44; 83 % of all clusters) and big clusters (9; 17 %). Small clusters consist of two (31; 70.5 % of small clusters), three (11; 25.0 %) or four (2; 4.5 %) tumuli. Big clusters contain five (1; 11.1 % of big clusters) six (3; 33.3 %), seven (3; 33.3 %), thirteen (1; 11.1 %) and sixteen (1; 11.1 %) tumuli.

From the demographic point of view, small clusters yielded the following empirical combinations (*Tab. 5, Fig. 3*):

1. adult male and female, 2. adult male with two or three adult females, 3. adult male and female with one or three children, 4. adult male, two or three females and one or two children, 5. two adult males, two adult females, juvenile male and a child, 6. two adult males, 7. two adult females, 8. adult male with

TABLE 5. *Frequency of empirical and interpretative types of burials in small tumulus clusters*

Empirical burial types			Interpretative burial types												Total	
	n	%	A. Parents with children		B. Brothers and sisters		C. Husbands and wives		D. Polygamous husbands or widowers		E. Two husbands and wives					
			n	%	n	%	n	%	n	%	n	%			n	%
1. M + F	2	4.7	1*	—	2	3.2	1*	1.6	—	—	—	—			2	3.2
2. M + nF	2	4.7	—	—	—	—	1*	1.6	1	1.6	—	—			3	4.8
3. M + F + C (+ nC)	5	11.6	5*	7.9	1**	1.6	5*	7.9	3*	4.8	—	—			11	17.5
4. M + nF + C (+ C)	3	7.0	3*	4.8	1**	1.6	—	—	—	—	1*	1.6			7	11.1
5. nM + nF + nC	1	2.3	1*	1.6	1	1.6	—	—	—	—	—	—			2	3.2
6. M + M	1	2.3	—	—	1	1.6	—	—	—	—	—	—			1	1.6
7. F + F	1	2.3	—	—	1	1.6	—	—	—	—	—	—			1	1.6
8. M + C (+ C)	8	18.6	8	12.7	1**	1.6	—	—	—	—	—	—			9	14.3
9. M + C + M	1	2.3	1*	1.6	1**	1.6	—	—	—	—	—	—			2	3.2
10. F + C (+ C)	10	23.3	10	15.9	4**	6.3	—	—	—	—	—	—			14	22.2
11. nF + nC	2	4.7	2*	3.2	2*	3.2	—	—	—	—	—	—			4	6.3
12. C + C (+ C)	7	16.3	—	—	7	11.1	—	—	—	—	—	—			7	11.1
Total	43	100.1	31	49.2	21	33.3	6	9.5	4	6.3	1	1.6			63	100.1

Explanations: * = taken twice, because they belong simultaneously into two types
** = added pairs of brothers and sisters contained in A type

one or two children, 9. adult male with a child and another young adult male, 10. adult female with one or two children, 11. two or three adult or juvenile females with one or three children, 12. two or three children.
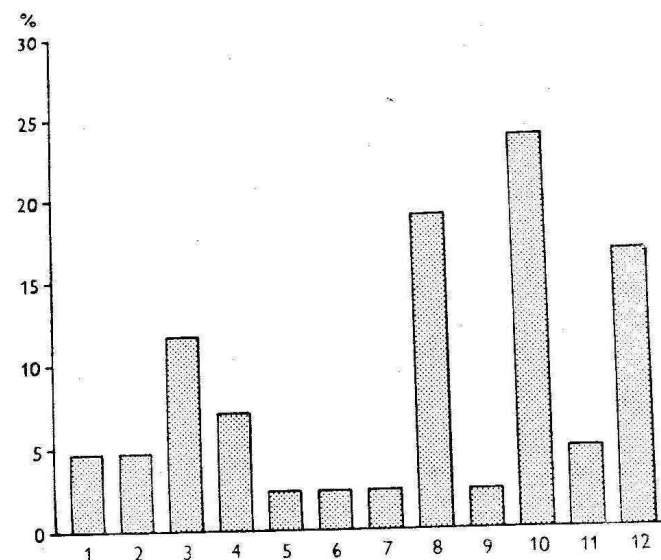

FIGURE 3. *Empirical types of burials in small tumulus clusters.*

The enlarged variability of burial types in small clusters points to the supposition that besides nearest blood relationship — similar to that found in multiple burials, out of which 20 are integrated in small clusters — also more distant relationship may be reflected.

The interpretation of the empirical types (*Tab. 5, Fig. 4*) is clear in types representing parents with children (No. 3), adult brothers (No. 6), adult sisters (No. 7), mothers and their children (No. 10) and infant brothers and sisters (No. 12). These types can be easily arranged into three (A—C) of the five interpretative types.

Greater attention must be payed to the other types. In view of the fact that there are two cases of adult brothers (type No. 6) and sisters (No. 7), we would prefere to include the two couples of adult male and female (type No. 1) also into type B.

Type No. 2 could be interpreted either as a burial of monogamous couple with adult daughters who died later or a polygamous union of a male with two or three females (also a widower marrying successively several wives could be considered). Because of this uncertainty we decided to arrange one case into type A (and simultaneously C), and the other into the added type D.

In type 4 single adult males are accompanied by two or three females. The possibility that a monogamous couple was later accompanied by one or two daughters would require a supposition of a 20—25 year interval between both interments which seems to be too long for the preservation of emotional bonds. Therefore, the other explanation of polygamous unions or successive marriages of widowers (type D) has to be taken into account (suiting also type A and partially B).

Type 5 cannot be explained as a three-generation burial accretion because of serious obstacles if indi-

vidual ages of the six buried individuals were taken into consideration. Therefore, we prefere the possibility of a joint burial of two monogamous couples, the second one with its son and infant child. It can be inferred that both males or females were either related or close friends. This would be a single case in another added type E.

In type 9 a burial of a father with his child has been complicated by addition of another young male, which could be either younger brother or another son of the father who died 12.5—22.5 years later than his father. Because of this ambiguity both types A and B are considered.
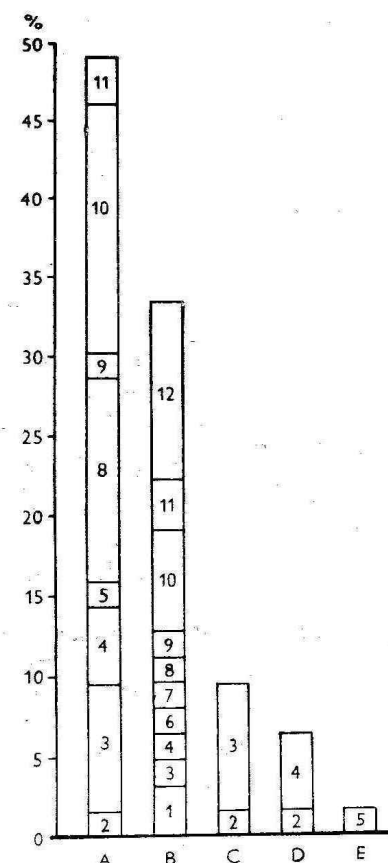

FIGURE 4. *Interpretative types of burials in small tumulus clusters A = parents with children, B = brothers and sisters, C = husbands and wives, D = polygamous husbands or widowers, E = two husbands and wives.*

Type 11 includes one case of burial of three adult females, most probably sisters, with a child of one of them and two children of the other. In another case an adult female and a juvenile female were buried, either sisters or mother and daughter, accompanied by an infant child of one of them. Both cases were arranged in the same time in types A and B.

The distribution of the resulting interpretative types ressembles multiple burials: almost half share is taken by type A, of which the majority were burials of mothers with their children (38.7 %, about half than in multiple burials), followed by burials of both parents with their children (32.3 %, 2.5 times more than in multiple burials) and fathers with their children (29 %, similarly as in multiple burials). In this form of burial the great differences in frequency, seen in the closely related multiple burials, disappear.

Type B, occurring in one third of cases, consists mainly of joint burials of brothers and sisters died in infancy, child or juvenile ages (76.2 %; more than in multiple burials), less in adult age (19.0 %; half as in multiple burials) and in combination of both ages (4.8 %).

Type C consists of lesser percentage than in multiple burials, due to the existence of additional types D and E.

The newly added type D could not be, indeed, demonstrated in multiple burials, because we may suppose that each of the died wives in polygamous unions or in successive marriages of widowers had to be buried in a separate burial chamber similarly as she possessed her own separate household during life.

BIG TUMULUS CLUSTERS

The nine big tumulus clusters are too complicated to be treated statistically as multiple burials and small clusters. They must be described and interpreted from the demographic point of view separately and individually (Strouhal, in print).
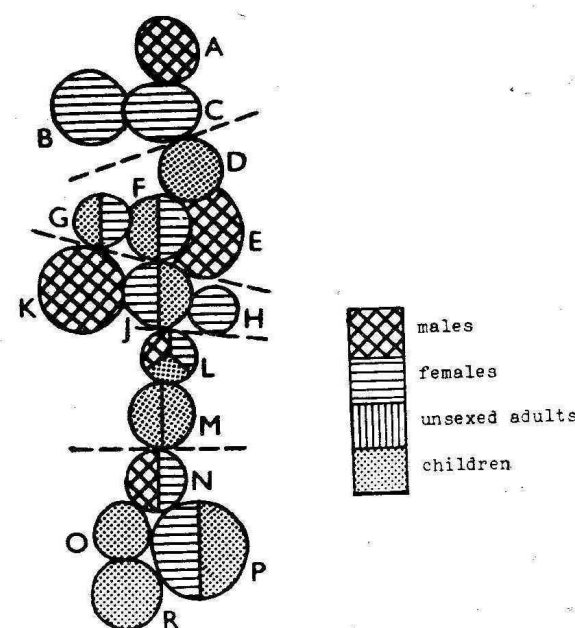

FIGURE 5. *Demographic structure of big tumulus 201.*

As contrasting examples we include the two largest ones. Tumulus cluster 201 (*Fig. 5*) forms a continuous row of 16 tumuli, containing remains of 24 individuals. As we were able to determine the direction of its growth (Strouhal 1984a: 68—69), we may follow it and divide the cluster demographically into 5 sections, the first four arranged in a chronological succession:

(1) In the oldest section adult male E was first to be buried followed by its child D, later by his first wife Fa, followed by an additional burial of their child Fb. Later his second wife Ga died, followed by her child Gb, who died later.

(2) It appears that first died the first adult wife Ja, followed later by her child Jb. Later, but in an indeterminable order, was buried the adult male K and his probable second adult wife H.

(3) A monogamous couple with its child was buried in tumulus L, followed by their two older children in tumulus M.

(4) An adult male Na was buried together with his first wife Nb, followed by the interment of their child O. Another older child Pb was followed by its mother and second wife Pa, and the row was closed by her younger child R.

(5) The section placed towards north of the oldest section (1) could be established at any time of the gradual growth of the described succession (1—4). Adult male A was buried in an indeterminable order with his first wife B, later his second wife C was wedged into the remaining space.

Summing up, we could discern five families, four of them polygamous with two wives (some of them could also be families of widowers who married later second wives) and one monogamous. Eight wives from polygamous unions (or successive marriages) got 7 prematurely dead children, contrasting with three dead children of the single wife from monogamous union. The continuous row (1—4) could represent a minimum lineage comprising 5 generations (including children of section 4) and a collateral family (5) of some brother or sister which could have joined the cluster at any time of the growth of the row (1—4).

Another arrangement of the burials of several interrelated families is shown by tumulus cluster 220 (*Fig. 6*). Except tumulus G, in which a complete monogamous family (male, female and infant) was buried, and a peculiarly shaped wedged tumulus M with the burial of a mother with an infant, all other tumuli of adult persons occupied the southern half, while burials of children were concentrated in the northern half of the cluster. Two husbands and wives could be
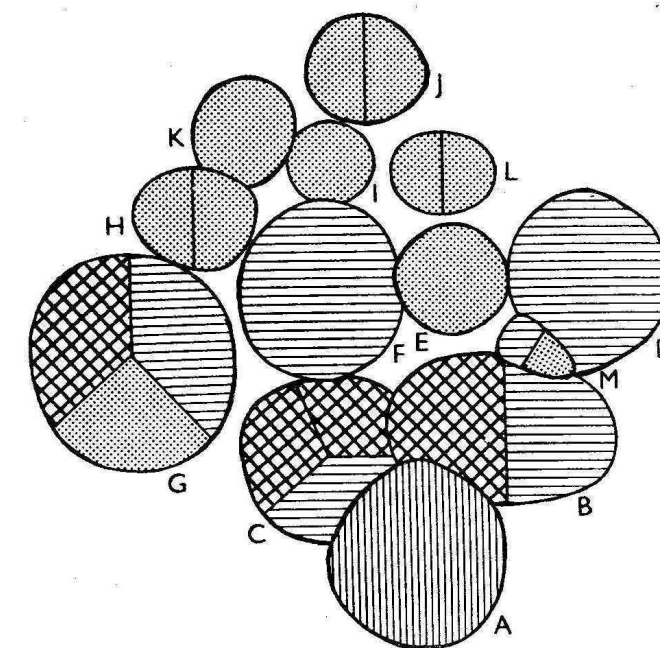

FIGURE 6. *Demographic structure of big tumulus 220. Signs as in Fig. 5.*

determined, viz in the oldest tumulus C containing also a second male Cb, probably a later buried young adult son, and in the following tumulus B. Lastly unsexed individual A was buried. If he were a male, the remaining adult females F, D and M could have been his three wives, or they could have belonged as wives, however, also to the three mentioned males Ca, Cb and Ba, the same being the case for individual A if it were a female. Three infants (E, I, K) and six children (Ha, Hb, Ja, Jb, La, Lb) belonged to the mentioned wives but owing to their distant position it can not be determined which child belonged to which female.

Summing up, this cluster appears to be an interesting blend of mono- and polygamous unions of 5—4 adult males and 6—7 adult females with their 10 children (in average 1.4—1.7 dead child for each female), most possibly belonging to a minimum lineage and/or collateral families.

In the total of big tumulus clusters we could identify, taking into account the order of the growth of the cluster, the age relations between couples of adult males and females and slight corrections (indeterminable sex of two individuals replaced by male sex and supposition of three fictitious males and a female buried outside the pertaining cluster), altogether 19 matrimonial units, out of which 8 (42.1 %) consisted of a husband and a wife, 11 (57.9 %) of a husband with two (7 cases) or three (4 cases) wives. Adding to this 6 mono- and 4 polygamous marriages (2 with two and 2 with three wives) found in small clusters, there were 14 (48.3 %) mono- and 15 (51.7 %) polygamous unions in clustered tumuli. The large proportion of polygamy explains well the mentioned big dominance of females (62.7 %) over males (37.3 %) in the clusters.

It should be added that clustering of tumuli (and polygamy) were mostly related to the highest social stratum (local chiefs and their families), less to the presumed heterogenous Middle Stratum and only exceptionally to the Lower Stratum (Strouhal, 1984b).

We already mentioned that among "polygamous" unions also successive mariages of widowers are possibly included, but owing to the fact that only a single possible opposite case of successive marriage of a widow was found (see Multiple Burials), their share could have been similarly small. One or two of the additional females could have been sisters of the male and their own husbands could have been buried outside the cluster.

The total number of prematurely dead infants, children and juveniles in big clusters was 51. This loss comprised none-to-four children per female, in average 1.5 children, or none-to-nine children per male, in average 2.7 children.

CONCLUSION

Only monogamous marriages, often accompanied with children, were clearly expressed in multiple burials. Together with them, polygamous unions, also mostly with prematurely dead children, occur in tumulus clusters, showing a recurring pattern and a high incidence in about a half of marriages reflected in clusters.

While bonds among the members of monogamous families were the reason for placing more dead into a burial chamber, complicated relationships in polygamous unions were one of the important causes of clustering the tumuli, the other reason being minimal lineages comprising more nuclear families, perhaps spanning over several generations and propably including collateral relationships (families of brothers and sisters).

The demographically revealed character of these two categories of joint burials explains well the dominance of females and children in them as compared with single burials. Socially bound partial polygamy explains well the surplus of females in the population of Wadi Qitna.

In the same time we did not find any explanation for the fact that less than half of the buried persons were buried in single burials.

We are aware of many simplifications and of the existence of alternative explanations, considering our contribution an experimental one. It was aimed not only at explaining the curious habit of joint burials observed in the cemetery in an unusually high proportion, but also to demonstrate how archaeological data, supplemented by demographic conclusions derived from physical anthropology, can provide a social anthropological insight into the family structure of an ancient population.

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