

c. Distribution of the Shaft Types in the Nucleus Cemeteries

(1) *The Shafts in the Fifteen Initial Mastabas of the Nucleus Cemeteries*

The distribution of the shaft types through the mastabas marked as the fifteen initial cores in the Western Field is as follows:

Type 1:

With entry at roof-level:

- (1) G 4160: type 1 br; area, 12.16 sq. m.; 32.59 cu. m.
- (2) G 4150: type 1 ar; area, 10.23 sq. m.; 25.06 cu. m.
- (3) G 4260: type 1 ar; area, 10.87 sq. m.; 30.11 cu. m.
- (4) G 4250: type 1 ar; area, 10.46 sq. m.; 25.52 cu. m.

Total with high entry of type 1, 4 shafts.

With entry low down in the wall of chamber:

- (1) G 4000 N: type 1 blx; 23.32 sq. m.; 89.78 cu. m.
South shaft intended to be of the same types but left unfinished in the form of type 3 brx.
- (2) G 2100 A: type 1 cm; area, 12.07 sq. m.; 34.4 cu. m.
With other shafts, of which B is of type 3 bf (area, 12.91 sq. m.), and C is of type 3 cr (area, 9.0 sq. m.).
- (3) G 2120: type 1 al; area, 11.16 sq. m.; 30.13 cu. m.
- (4) G 2130: type 1 cl; area, 9.61 sq. m.; 21.62 cu. m.
- (5) G 1201: type 1 al; area, 13.6 sq. m.; 46.51 cu. m.
- (6) G 1203: type 1 cl; area, 9.3 sq. m.; 30.69 cu. m.
- (7) G 1205: type 1 cl; area, 8.99 sq. m.; 21.47 cu. m.
- (8) G 1225: type 1 bl; area, 8.96 sq. m.; 24.19 cu. m.
- (9) G 1223: type 1 bmx; area, 15.35 sq. m.; 43.59 cu. m.
- (10) G 2210: type 1 bl; area, 16.5 sq. m.; 54.45 cu. m.

Total with low entry, 10 shafts.

Total number of shafts of type 1 among the 15 initial mastabas, 14. Of these 14 shafts 4 have entry at roof-level, all in Cem. G 4000. Ten have a low entry with a step down from floor of passage to floor of chamber, 1 in Cem. G 4000, 4 in Cem. G 2100, and 5 in Cem. G 1200.

Two of the passages are sloping, G 4000 N and G 1223 A, while all the rest (12 shafts) have horizontal passages. All 14 chambers are lined and all but 1 paved with fine white limestone. It is to be noted that the chambers of the block of 4 normal mastabas in Cem. G 4000 have a general resemblance and differ in their high entry from the chambers of Cem. G 1200 and G 2100. In size, the largest chamber is in G 4000 N (89.78 cu. m.). The chambers in order of cubic capacity are:

- (1) G 4000 N: type 1 blx; area, 23.32 sq. m.; 89.78 cu. m.
- (2) G 2210: type 1 bf; area, 16.5 sq. m.; 54.45 cu. m.
- (3) G 1201: type 1 al; area, 13.6 sq. m.; 46.51 cu. m.
- (4) G 2100 A: type 1 cm; area, 12.07 sq. m.; 34.4 cu. m.
- (5) G 4160: type 1 br; area, 12.16 sq. m.; 32.59 cu. m.
- (6) G 1203: type 1 cl; area, 9.3 sq. m.; 30.69 cu. m.
- (7) G 2120: type 1 al; area, 11.16 sq. m.; 30.13 cu. m.
- (8) G 4260: type 1 ar; area, 10.87 sq. m.; 30.11 cu. m.

(c) The following nine mastabas, row 4, lines 1-6, and line 7 (rows 4-6):

	Core type	Slab- stelae	Shaft type	Area sq. m.	Capacity cu. m.	Remarks
(14) G 4140 . .	III i	princess	2 brx (ramp)	16.45	46.88	lined and paved
(15) G 4240 . .	IV i	..	2 bm (stair)	20.01	53.42	unlined
(16) G 4340 . .	IV i	no name	2 cr (ramp)	10.98	28.57	lined, not paved
(17) G 4440 . .	IV i	..	2 brx (ramp)	17.62	47.75	unlined
(18) G 4540 . .	IV i	..	2 ar (stair)	9.84	27.55	lined, not paved
(19) G 4640 . .	IV i	..	2 br (stair)	9.22	23.6	lined, not paved
(20) G 4740 . .	IV i	..	2 cr (stair)	16.66	42.64	unlined
(21) G 4750 . .	IV i	..	2 br (stair)	21.65	51.83	unlined coffin- recess.
(22) G 4760 . .	IV i	name lost	2 cr (stair)	16.4	50.84	unlined

(d) The nine mastabas of row 3 and line 8.

The cores of row 3 (lines 3-8) were by position in immediate succession to the twenty-two mastabas already listed above. Their chambers present a decided degeneration of the earlier mastabas in this cemetery, as follows:

(23) G 4330 . .	IV i	..	3 bl	7.95	18.28	
(24) G 4430 . .	IV i	..	5 a (2)	3.64	5.82	
(25) G 4530 . .	IV i	..	4 a (2)	3.12	5.55	
(26) G 4630 . .	IV i	..	3 am	12.51	26.64	
(27) G 4730 . .	IV i	..	7 x	..	..	unused shaft
(28) G 4830 . .	IV i	..	6 b (2)	2.52	2.39	
(29) G 4840 . .	IV i	..	4 b (2)	9.44	28.32	
(30) G 4850 . .	IV i	..	4 a (2)	2.48	2.6	
(31) G 4860 . .	II a	name lost	4 a (2) W	7.16	13.58	north shaft
			6 b (4)	2.86	..	south shaft

(e) The mastabas of row 2.

As I reconstruct the history of this cemetery, row 2 was added at this point.

(32) G 4320 . .	IV i	..	6 a (2)	1.6	1.78	upper chamber
			6 a (2)	1.6	1.6	lower chamber
(33) G 4420 . .	IV i	..	5 b (2)	2.2	2.75	
(34) G 4520 . .	IV i	..	6 d	0.11	0.09	upper chamber
			5 b (1)	4.65	7.44	middle chamber
			5 a (1)	6.21	8.69	lower chamber
(35) G 4620 . .	IV i	..	4 b (1)	8.25	14.33	
(36) G 4720 . .	IV i	..	4 b (1)	4.0	6.2	
(37) G 4820 . .	IV i	..	6 b (irregular)	2.94	3.82	

(f) The five mastabas in row 1.

Row 1 appears to be the last and to have only five mastabas. Of these the second, G 4410, was reconstructed later and G 5810 was never built.

(38) G 4310 . .	IV i	..	6 b (1)	1.9	1.99	upper chamber
			6 b (2)	1.84	1.84	lower chamber

	Core type	Slab- stelae	Shaft type	Area sq. m.	Capacity cu. m.	Remarks
(39) G 4410 . . .	IV i	..	4 b (1)	10.65	20.76	
(40) G 4510 . . .	IV i	..	6 b (1)	4.8	6.96	
(41) G 4610 . . .	IV i	..	4 b (1)	7.25	15.95	
(42) G 4710 . . .	IV i	..	4 a (2) x	11.16	17.85	sole

The general chronological order of these forty-two shafts is quite clear. The first five were among the earliest cores built in the reign of Cheops and were probably all finished and used in that reign or soon after. The next shaft the date of which is fixed approximately is No. 24 (G 4430), the burial in which was made in the reign of Chephren. The chamber was of type 5 a (2). The next chamber which can be dated is No. 34 (G 4520), in which the chief burial was dated to the reign of Weserkaf. The shaft in No. 39 (G 4410) had a burial dated also to the reign of Weserkaf.

The shaft types in this cemetery show clearly that the earliest form of chamber was type 1, always with lined walls and pavement. Type 1 is presented by the five initial mastabas and the eight succeeding mastabas of rows 5 and 6 in lines 3-7, with one exception. The exception is No. 13, the last mastaba in row 5 (G 4650), which, like the others in form, remained unlined (unfinished). Four of the five initial mastabas have the opening at roof-level. The first two chambers in row 6 and the four in row 5 have the opening in the middle of the wall, while the third and fourth (Nos. 8 and 9) in row 6 have the opening low down in the chamber wall. It is to be noted that G 4000 also had the entry low down.

The position of the opening varied at all times in Dyn. IV. Yet it is obvious that the first five chambers with high opening were constructed by the same craftsmen, and the workmanship of the succeeding eight chambers indicated that the whole thirteen may have been by the same group with only a few changes in the personality of individual members.

The workmanship of the next nine mastabas is also very similar to that of the first thirteen, but a new and distinctive feature was introduced which I designate as type 2, the ramp or stair inside the chamber leading from the floor of the passage to the floor of the chamber. All the mastabas in row 4, from G 4140 to G 4740, and the two northern mastabas in line 7 (G 4750 and 4760) are of type 2. These mastabas form a line surrounding the thirteen on the south and the east, and apparently constructed in order from west to east and from there to the north. No other example occurs in the whole Western Field except in the great isolated mastaba G 2000. The group of chambers is obviously later than those of type 1 in Cem. G 4000. They may have been made by the same gang as made the others, but present a development of the forms which they were using. Type 2 was also a lined chamber, but five examples (G 4240, G 4440, G 4740, G 4750, and G 4760) were left unlined, although designed for linings as shown by red construction lines.

The twenty-two mastabas containing the chambers of types 1 and 2, of which sixteen are lined chambers, form a solid block in Cem. G 4000. Their chambers were certainly the first to be used for burials in this cemetery. The size and the quality of the chambers make it extremely probable that all were constructed in the reign of Cheops. This probability is increased by the fact that after the construction of the eight twin-mastabas of the Eastern Field, the favourite sites for members of the royal family were east of the First Pyramid in the reign of Chephren and east of the Second Pyramid in the reign of Mycerinus. After the use of the burial-places in the block of twenty-two, the next mastabas to be used were probably in row 3 and line 8, but the chambers vary greatly in type and size so that the order in which the old 2-m. shafts were provided with burial-chambers is difficult to

determine. The nine shafts presented by row 3 (G 4330-4830, 4840-4860) have chambers of the following types:

- 2 of type 3: G 4330 and 4630.
- 4 of type 4: G 4530, 4840, 4850, and 4860.
- 1 of type 5: G 4430.
- 1 of type 6: G 4830 (also south chamber in 4860).
- 1 unused shaft of type 7 x: G 4730.

The chamber of type 5 in G 4430 contained a sealing of Chephren and any example of type 4, 5, or 6 may be as early as Chephren. The sizes of these chambers vary greatly, as follows:

- (29) G 4840: type 4 b (2); area, 9.44 sq. m.; 28.32 cu. m.
- (26) G 4630: type 3 am; area, 12.51 sq. m.; 26.64 cu. m.
- (23) G 4330: type 3 bl; area, 7.95 sq. m.; 18.28 cu. m.
- (31) G 4860 N: type 4 a (2); area, 7.16 sq. m.; 13.58 cu. m.
- (24) G 4430: type 5 a (2); area, 3.64 sq. m.; 5.82 cu. m.
- (25) G 4530: type 4 a (2); area, 3.12 sq. m.; 5.55 cu. m.
- (30) G 4850: type 4 a (2); area, 2.48 sq. m.; 2.6 cu. m.
- (28) G 4830: type 6 b (2); area, 2.52 sq. m.; 2.39 cu. m.
- (27) G 4730: type 7 x.

Four of these have areas of over 7 sq. m. and are really large chambers. The figures for the first two show sizes comparable with those of the chambers of types 1 and 2, but less than the rock-cut capacity of the lined chambers. G 4840 (type 4 b (2)), with an area of 9.44 sq. m. and cubic capacity of 28.32 cu. m., the largest of the chambers, belonged to the Princess Weneshet. The next in size, the chamber in G 4630, is almost equally large. This chamber and the slightly smaller one in G 4330 are of type 3. G 4330 has an area of 7.95 sq. m. and a cubic capacity of 18.28 cu. m. The fourth in size (G 4860), which has an area of 7.16 sq. m. and a capacity of 13.58 cu. m., belonged to an official who owned a slab-stela. The rest are small chambers in comparison with the first four. Even the chamber of G 4430, which contained a sealing of Chephren, had an area of 3.64 sq. m. (5.82 cu. m.), while one shaft (G 4730) appears never to have been used. The evidence seems to point to the order of the use of the shafts as being first the group G 4330, 4630, 4840, and 4860, second 4430, 4530, and 4850. The rest were probably used later.

The shafts in the cores of rows 1 and 2 were with one notable exception used in Dyn. V. The exception is No. 42, G 4710, used by Sethuw. The old core was converted by a casing into a mastaba of type VI a, with nummulitic casing and chapel of type (3) of mixed masonry. The rock-cut part of the 2-m. shaft contracted to 1.7 m. square at the bottom. The chamber was of type 4 a (2) x with an area of 11.16 sq. m. and a capacity of 17.85 cu. m. It contained a nummulitic limestone coffin with *qrst(?)*-lid and canopic pit partly sunk and partly built in SE corner. The associated facts place this shaft in Dyn. IV.

The rest of the chambers in lines 2 and 1 have the rock-cut part much smaller than the cased 2-m. part and are of the later types 4-6. The chambers are of medium size and small. Two of the burials are dated to the reign of Weserkaf, G 4410 and G 4520. Three of the shafts have more than one burial-chamber in the single shaft, G 4320 (2 chambers), G 4520 (3 chambers), and G 4310 (2 chambers).

The chambers arranged in the order of cubic capacity, counting only the chief chamber in shafts with more than one chamber, are as follows:

- (39) G 4410: type 4 b (1); area, 10·65 sq. m.; 20·76 cu. m.
 (42) G 4710: type 4 a (2) x; area, 11·16 sq. m.; 17·85 cu. m.
 (41) G 4610: type 4 b (1); area, 7·25 sq. m.; 15·95 cu. m.
 (35) G 4620: type 5 b (1); area, 8·25 sq. m.; 14·33 cu. m.
 (34) G 4520: type 5 a (1); area, 6·21 sq. m.; 8·69 cu. m. 3 chambers.
 (40) G 4510: type 6 b (1); area, 4·8 sq. m.; 6·96 cu. m.
 (36) G 4720: type 5 b (1); area, 4·0 sq. m.; 6·2 cu. m.
 (37) G 4820: type 6 b (irreg.); area, 3·0 sq. m.; 3·0 cu. m.
 (33) G 4420: type 5 b (2); area, 2·2 sq. m.; 2·75 cu. m.
 (38) G 4310: type 6 b (2); area, 1·84 sq. m.; 1·84 cu. m. 2 chambers.
 (32) G 4320: type 6 a (2); area, 1·6 sq. m.; 1·6 cu. m. 2 chambers.

Four of these chambers are really large chambers with a cubic capacity of from 14 to 20 cu. m. Of these, three are of type 4, the three largest, and one of type 5. Five have capacities between 2 and 8 cu. m. and represent ordinary 'large tombs' according to the sizes used in the later mastabas of Dyn. V, but these are not large chambers from the point of view of mastabas of the size of these mastabas in Cem. G 4000. Three of these are of type 5 and two of type 6. The remaining two chambers are less than 2 cu. m. in size and are small chambers from any point of view. They are of type 6.

The shafts of the different blocks of mastabas show the following distribution of types:

- (a) Five initial mastabas: shafts of type 1; used in the reign of Cheops.
 (b) Eight succeeding mastabas: types 1 and 3 (one mastaba); used in the reign of Cheops.
 (c) The succeeding nine mastabas: type 2; used after the reign of Cheops.
 (d) The following nine mastabas: types 3, 4, 5, 6, and 7 x; used in the reign of Chephren and later.
 (e) The final eleven mastabas of rows 2 and 1; types 4, 5, 6, one of type 4 used in Dyn. IV, and the rest in Dyn. V.

(3) *The Distribution of the Shaft Types in Cem. G 2100*

The shafts in Cem. G 2100 present a period of usage somewhat similar to those of Cem. G 4000. Four of the five initial mastabas were of type 1, and one of them (G 2130) was certainly used in the reign of Cheops (mud sealing). The types occur as follows:

(a) The five initial mastabas:

	Core type	Slab- stela	Shaft type	Area sq. m.	Capacity cu. m.	Remarks
(1) G 2130 . .	II b	..	1 cl	9·61	21·62	sole
(2) G 2100 A .	II a	recess	1 cm	12·24	36·72	chief
B .	II a		3 bf	12·91	18·62	second shaft
C .	II a		3 cr	9·0	17·1	third
(3) G 2120 . .	II a	Seshat-sekhentyuw	1 al	11·16	30·13	sole
(4) G 2110 . .	II a	..	4 a (2)	13·11	26·87	sole
(5) G 2210 . .	II a	..	1 bl	16·5	54·45	sole

The exact order in which these five shafts were used for burials is not to be definitely fixed.

(b) The following cores:

The following six cores, three rows in two lines, appear to have been built as one continuous operation after the first five.

The shafts of these six cores have the following types:

	Core type	Slab- stela	Shaft type	Area sq. m.	Capacity cu. m.	Remarks
(6) G 2135 (Junker)	II a	no name	1 cm	9.24	28.18	sole
(7) G 2140 . . .	II a	..	3 bf	4.83	6.0	sole
	VI b (drab)	..	low form			
(8) G 2150 . . .	II a	..	4 b (1)	14.0	23.1	chief
	VII b (grey)	..	6 a (3)	2.59	2.46	second shaft
(9) G 2155 . . .	II a	..	4 a (4)	17.2	37.84	chief shaft
	VII					
(10) G 2160 . . .	II a	..	4 a (2) x (unfin.)	7.15	10.72	chief shaft
(11) G 2170 . . .	II a	..	6 a (3)	2.76	3.31	sole

Only one of the shafts in the last six mastabas was given a chamber of type 1 with lining and pavement. That is G 2135, excavated by Junker, and it had a slab-stela. There seems no reason to doubt that G 2135 was used in the reign of Cheops or soon after. The mastaba G 2150 at the north end of the same line has a chapel which was decorated after the reign of Mycerinus, and it is probable that both the shafts in 2150 and 2140 were used about the end of Dyn. IV. The distribution by types is as follows:

- Type 1: four of the five initial shafts and the first on the south of the third line; total 5 shafts.
- Type 3: one example; G 2140 (capacity 6.0 cu. m.).
- Type 4: four examples; G 2110 (26.87 cu. m.), G 2150 (chief shaft of two-shaft mastaba); 2155, 2160 (area, 7.15 sq. m.; capacity, 10.72).
- Type 6: one chief shaft, G 2170; and the second shaft in 2150.

The chambers include five lined chambers and six plain rock-cut chambers. As the lined chambers represent a more expensive form and represent rock-cut chambers of still larger size, I arrange the chambers according to size in two groups:

(a) Lined chambers in order of size:

(5) G 2210 . . .	1 bf	16.5 sq. m.	54.45 cu. m.	no pavement; sole shaft
(2) G 2100 A . . .	1 cm	12.24 sq. m.	36.72 cu. m.	chief shaft
(3) G 2120 . . .	1 al	11.16 sq. m.	30.13 cu. m.	sole shaft
(6) G 2135 . . .	1 cm	9.24 sq. m.	28.18 cu. m.	no pavement; sole shaft
(1) G 2130 . . .	1 cl	9.61 sq. m.	21.62 cu. m.	sole shaft

(b) The six rock-cut chambers:

(9) G 2155 . . .	4 a (4)	17.2 sq. m.	37.84 cu. m.	chief shaft
(4) G 2110 . . .	4 a (2)	13.11 sq. m.	26.87 cu. m.	sole shaft
(8) G 2150 . . .	4 b (1)	14.0 sq. m.	23.1 cu. m.	chief shaft
(10) G 2160 . . .	4 a (2) x	7.15 sq. m.	10.72 cu. m.	sole shaft
(7) G 2140 . . .	3 bf (low form)	4.83 sq. m.	6.0 cu. m.	sole shaft
(11) G 2170 . . .	6 a (3)	2.76 sq. m.	3.31 cu. m.	sole shaft

One of the most significant facts is the small size of the lined chamber of the largest and most expensive of the mastabas, G 2130, which was nevertheless the smallest of the lined chambers (9.61 sq. m. and 21.62 cu. m.). This size is in accordance with the sizes of the lined chambers in the four initial mastabas of normal size in G 4000 and the four initial mastabas of normal size in Cem. G 1200. I conclude that G 2130 was the first of the chambers to be finished in Cem. G 2100, and was previous in date to the chambers of larger size in G 4000 and G 1201. I believe that after the construction of these large chambers the size of the lined chambers was also increased. It is clear that the largest chamber, G 2210, which had no pavement and unfinished lining, was by reason of the reconstruction of the mastaba later than 2130, 2120, and 2100. It is to be associated with the fourth in size, G 2135, because of the similar state of the lining and lack of pavement. But 2135, by reason of its smaller size and its slab-stela, probably had its chamber constructed earlier than that of 2210. Particular attention is to be directed to the size and beautiful finish of the lined chamber A of G 2100, the tomb of the mother or father of 'Prince' Mer-ib.

Three of the rock-cut chambers are of very large size, all with a cubic capacity of over 20 cu. m. They are all three of shaft type 4 and all three had decorated chapels. The fourth in size, the chamber of G 2160, is of about 10 cu. m., while the other two are very small for the size of the mastabas, being 6.0 cu. m. (G 2140) and 3.31 cu. m. (G 2170). G 2140 has an interior white stone chapel of type (3) with unfinished decoration, and the other two probably had exterior c.b. chapels destroyed or obstructed by later constructions. The two shafts 2150 and 2155 are shown by the chapels of those mastabas to be either late in Dyn. IV or early in Dyn. V. The shaft 2110, by reason of the portcullis groove and the reserve head and the old type of white limestone sarcophagus, appears to be earlier. Next after this probably came 2140. The two chambers in 2160 and 2170 are difficult to place but are probably of late Dyn. IV or early Dyn. V. Thus the series runs parallel to those in Cem. G 4000 but contains a much smaller number of chambers.

(4) *The Distribution of the Shaft Types in Cem. G 1200*

While the shafts in Cem. G 4000 and G 2100 present a variety of types and range in time to the end of Dyn. IV (to Dyn. V in Cem. G 4000), Cem. G 1200 is much more homogeneous. All the chambers of the main mastabas are of type 1 and only the shafts in the annexes of G 1223, 1225, 1227, and 1233 present another type. Eight of the ten mastabas had slab-stelae. It is clear that the ten mastabas are the result of a continued construction beginning in the reign of Cheops, as proved by the mason's graffito found on a lining block from the chamber of G 1203. I would place the shafts in the following chronological order:

(1) G 1223	.	.	II a	Prince	1 bmx	9.53 sq. m.	24.8 cu. m.	sole shaft
			IV iii	Ka-m-aha				
(2) G 1203	.	.	II a	Kanofer	1 cl	9.3 sq. m.	30.69 cu. m.	sole shaft
(3) G 1225	.	.	II a	Princess	1 bl	8.96 sq. m.	24.19 cu. m.	sole shaft
			IV iii	Nefert-yabet				
(4) G 1205	.	.	II a	Khufuw-nekht	1 cl	8.99 sq. m.	21.47 cu. m.	sole shaft
(5) G 1201	.	.	II a	Prince	1 al	13.6 sq. m.	46.51 cu. m.	sole shaft
			IV iii	Wepemnofret				

The above are the five initial mastabas.

(6) G 1227	.	.	II a	Sethy-hekenet	1 ar	9.73 sq. m.	28.7 cu. m.	sole shaft
(7) G 1207	.	.	II a	Nofert	1 al	8.64 sq. m.	19.14 cu. m.	sole shaft

(8)	G 1233	. .	II a	..	1 alx	10.95 sq. m.	39.97 cu. m.	sole shaft
(9)	G 1235	. .	II a	Yeny	1 af	10.58 sq. m.	30.68 cu. m.	sole shaft
(10)	G 1209	. .	II a	..	1 cl	6.37 sq. m.	12.42 cu. m.	sole shaft

Arranged in order of the cubic capacity the list is as follows:

(5)	G 1201	. .	II a	Prince Wepemnofret	1 al	13.6 sq. m.	46.51 cu. m.	sole
(8)	G 1233	. .	IV iii	..	1 alx	10.95 sq. m.	39.97 cu. m.	sole shaft
(2)	G 1203	. .	II a	Kanofer	1 cl	9.3 sq. m.	30.69 cu. m.	sole
(9)	G 1235	. .	II a	Yeny	1 af	10.58 sq. m.	30.68 cu. m.	sole
(6)	G 1227	. .	II a	Sethy-hekenet	1 ar	9.73 sq. m.	28.7 cu. m.	sole
(1)	G 1223	. .	II a	Prince Ka-m-aha	1 bmx	9.53 sq. m.	24.8 cu. m.	sole
(3)	G 1225	. .	IV iii	Princess Nefert-yabet	1 bl	8.96 sq. m.	24.19 cu. m.	sole
(4)	G 1205	. .	II a	Khufuw-nekht	1 cl	8.99 sq. m.	21.47 cu. m.	sole
(7)	G 1207	. .	II a	Nofert	1 al	8.64 sq. m.	19.14 cu. m.	sole
(10)	G 1209	. .	II a	..	1 cl	6.37 sq. m.	12.42 cu. m.	sole

It is to be noted that the five initial mastabas have four chambers of about the same size as those of the initial mastabas in Cem. G 4000 and also one of more than usual size. The chambers of normal size built in the early part of the Cheops work in this cemetery had floor areas of about 10 sq. m. and capacities of about 27 cu. m. The later chambers, while they often follow the early norm, present great variations, on the one hand increases in size and on the other diminutions. In order to complete the review of this cemetery I give here the shafts in the annexes of these mastabas which were built in two cases before the main mastaba was complete and the fourth after its completion:

(11)	G 1223-annex	. .	II a	..	3 clx	5.5 sq. m.	8.25 cu. m.	sole
(12)	G 1225-annex	. .	II a	..	3 bf	5.72 sq. m.	9.03 cu. m.	sole
(13)	G 1233-annex	. .	II a	..	6 b (1) (irreg.)	5.91 sq. m.	7.97 cu. m.	sole
(14)	G 1227-annex	. .	X b	..	5 b (1)	3.99 sq. m.	7.68 cu. m.	chief shaft
	1227 (= 1228)	. .	..	..	7 x	..	..	second shaft

The order of the shafts thus presented is types 1, 3, 4, 6, and 5. It seems clear that all these shafts were made in Dyn. IV, while the ten shafts of type 1 were probably prepared in the reign of Cheops and used in that reign or no later than the reign of Chephren.

(5) *Shaft Type of the Isolated Mastaba, G 2000*

The great core-mastaba G 2000 with its unfinished white casing is of the rare core-type III ii, and its construction was set in the preceding chapter as later than the foundation of the three early cemeteries of the Western Field. The type of its shaft, type 2, associates the chamber with the nine chambers of that type in Cem. G 4000 and with the similar great mastaba G 7510 in the Eastern Field.

(1)	G 2000	. .	IV iii	large 2 alx (ramp; unlined)	36.36 sq. m.	204.67 cu. m.	sole shaft
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The enormous size of the rock-cut chamber taken with the red lines on the ceiling indicates that a lining had been designed as in the four unlined chambers of this type in Cem. G 4000.

(6) *The Distribution of the Shaft Types in Cem. G 7000*

With the shaft types of the reign of Cheops marked out in the three nucleus cemeteries of the Western Field, the shaft types of Cem. G 7000 made after year 20 of Cheops, and onwards to the end of the reign of Chephren, may now be examined.

The type forms are distributed as follows:

(a) The four northern twin-mastabas:

	Core type	Mast. type	Shaft type	Area sq. m.	Capacity cu. m.	Remarks
(1) G 7120 A	IV ii	VI x	3 cf	25.0	87.5	sloping passage from ENE; granite coffin; Prince Ka-wab
(2) G 7110 B	IV ii	VI x	3 af	22.25	77.87	unused: Hetep-heres II
(3) G 7220 A	IV i	VI x	3 amx	41.43	122.64	unfin. red granite coffin; Hor-dedef
(4) G 7210 B	IV i	VI x	3 af	25.18	85.61	
(5) G 7320 A	IV ii	VI x	3 af	26.22	89.14	red granite coffin; broken
(6) G 7310 B	IV ii	VI x	4 a (1)	27.23	58.27	w. lst. coffin; broken
(7) G 7420 A	III	VI x	3 cmx	32.49	120.21	unused (?)
(8) G 7410 B	III	VI x	3 af	41.88	121.22	2 chambers; red granite sarc.; Meresankh II

(b) The finished twin-mastabas at the west end of the southern row:

(9) G 7130 B	IV	VI x	4 a (1)	43.59	113.08	2 rooms and alcove burial-chamber partly lined; altered by Ptol. cuttings; granite coffin; Prince Khufuw-khaf
(10) G 7130 A	IV	VI x	6 b (2)	3.62	3.8	open and empty

(c) The two unfinished cores of the southern twin-mastabas:

(11) G 7230 B	IV	VI e	3 clx	18.92	61.49	altered by Ptol. cuttings
(12) G 7230 A	IV	VI e	3 al	21.6	64.8	open and empty
(13) G 7330 B	IV	VI	3 bf	15.48	52.53	open and empty; altered by Ptol. cuttings
(14) G 7330 A	IV	VI	3 bf	7.2	13.68	unfinished; plundered

(d) The fourth of the southern twin-mastabas, cased in the reign of Chephren:

(15) G 7430 A	IV	VI x	3 am	42.0	136.42	2 rooms; red granite sarc.; Min-khaf
(16) G 7430 B	IV	VI x	4 a (1)	13.0	43.55	2 chambers; 2nd unfinished (lined)

(e) The succeeding six mastabas built around the eight twin-mastabas:

(17) G 7510 B	IV iii	..	2 amx	13.11	45.88	no sarc.; no can. rec.; no pavement
	VI x (ramp)					
(18) G 7650 C	IV iv	..	3 afx	25.7	100.23	granite sarc.; chief shaft
	B IV x	..	7 x	..	..	unused
	A ..	..	3 amx	24.65	92.44	empty

	Core type	Mast. type	Shaft type	Area sq. m.	Capacity cu. m.	Remarks
(19) G 7450 A	IV iii VI (unfin.)	..	3 al	22.74	60.49	rough-built burial-pit
B	..	..	7 x	..	..	shaft B; unused
(20) G 7520 A	IV	..	3 cm	24.56	88.41	stone coffin; intrusive
(21) G 7530 A	r.c.	..	4 a (1)	15.4	28.79	bl. gran. sarc.; Meresankh III
(22) G 7350 A	IV	VI x	3 am	33.8	167.31	red gran.; Hetep-heres II (?)
B	..	..	7 x	..	..	unused
C	..	.. (2)	4 b (1)	10.54	15.81	unfinished
		.. (1)	6 b (1)	3.8	3.87	unfinished (?)
(23) G 7050 B	..	V x	3 bm	17.95	38.59	reused Ptol.
(f) The eight following nummulitic mastabas of type VI a:						
(24) G 7550 B	VI a (3)	..	3 amx	24.22	80.82	Duwa-ne-Hor
A	..	..	6 b (2) (unfin.)	0.74	0.4	begun as type 4
(25) G 7660 B	VI a (3)	..	3 afx	32.22	81.45	2 connect. rooms; red gran. sarc.; Ka-m-sekhem
A	..	..	3 cl	27.28	105.85	empty
(26) G 7760 B	VI a (3)	..	3 al	40.71	122.84	2 connect. rooms; red gran. sarc.; Min-dedef
A	..	..	3 bf	8.75	15.31	empty
(27) G 7750 B	VI a (3)	..	3 am (1) type 3 (unfin.)	6.86	12.35	chamber 2 chamber 1
A	..	..	3 bf	6.5	19.82	empty
(28) G 7060 B	VI a (3)	..	4 b (4) x	17.88	35.76	w. lst. sarc.; Neferma'at
(29) G 7070 B	VI a (3)	..	4 b (4) x	18.88	38.59	w. lst. sarc.; Seneferuw-khaf
(30) G 7820 A	VI a (3)	..	4 b (1)	6.88	12.04	empty; Princess Nefert-kauw
B	..	..	3 af	16.4	47.56	canopic pit; husband of prin- cess
(31) G 7810 A	VI a (3)	..	3 afx	18.13	46.32	coffin-pit; canopic pit; turning recess; wife of Zaty
B	..	..	3 bf	19.78	63.29	canopic pit; turning recess; Prince Zaty
(g) Mastabas in lines 5 and 6 south of 7550 and 7660:						
(32) G 7560 A	VI a (3)	..	7 x	..	..	no chamber
B	..	..	4 b (1)	12.84	37.71	broken w. lst. coffin and two reserve heads
(33) G 7670 A	VI a (3)	..	4 b (1) (unfin.)	5.26	4.49	in process of enlargement
B	..	..	3 bf	11.34	22.11	canopic pit; plundered
(34) G 7690 A	IV iii	..	3 af	12.58	19.12	plundered
B	..	..	4 a (1) x	9.28	19.3	plundered

The occurrence of the types may be summarized as follows:

(a) The four northern twin-mastabas:

Type 3 af: G 7110 B, 7210 B, 7410 B, 7320 A; 4 examples.

Type 3 amx (stair): G 7220 A; 1 example.

Type 3 cf: G 7120 (sloping passage); 1 example.

Type 3 cmx: G 7420 A; 1 example.

Sum total of type 3: 7 shafts.

Type 4 a (1): G 7310 B; 1 example.

Total shafts 8: of which 7 are of type 3, while 1 is of type 4.

It is to be noted that all the other shafts in the four northern twin-mastabas were of type 7 x and apparently unused.

(b) The finished mastabas, the westernmost of the four southern twin-mastabas:

Type 4 a (1) (2 chambers and coffin alcove): G 7130 B; 1 example.

Type 6 b (2): G 7130 A; 1 example.

Total: 1 shaft of type 4 and 1 shaft of type 6.

(c) The two unfinished mastabas of the four southern twin-mastabas:

Type 3 bf: G 7330 A and B; 2 shafts.

Type 3 al: G 7230 A; 1 example.

Type 3 clx: G 7230 B; 1 example.

Total number of shafts: 4, all of type 3.

(d-e) The fourth twin-mastaba on the south and the succeeding six mastabas:

Type 2 amx (ramp) lined: G 7510 B.

Type 3 afx: G 7650 A.

Type 3 al (unfin.): G 7450 A.

Type 3 am: G 7430, 7350 A; 2 examples.

Type 3 amx: G 7650 A; 1 example.

Type 3 bm: G 7050 B; 1 example.

Type 3 cm: G 7520 A; 1 example.

Total examples of type 3: 7 shafts.

Type 4 a (1) (lined): G 7430 B (second room unfinished).

Type 4 a (1): G 7530 A; 1 example.

Type 4 b (1): G 7350 C (2); unfinished.

Total number of shafts, 11 in 7 mastabas: 1 of type 2; 7 of type 3; and 3 of type 4, excluding formless unfinished chambers and shafts of type 7 x.

One of the shafts (G 7530 A) of type 4 a (1) was made probably in the first year of Shepseskaf. The shafts in 7350 are assigned by me to a few years later, shaft A of type 3 am and C of type 4 b (1). All the other shafts in this group of seven mastabas were made after the accession of Chephren and probably before the end of his reign.

(f) The eight following nummulitic mastabas of type VI with chapels of type (3):

Type 3 afx: G 7660 B (2 chambers), 7810 A; 2 examples.

Type 3 bf: G 7750 A, G 7810 B; 2 examples.

Type 3 bfx: G 7760 A.

Type 3 al: G 7760 B (2 rooms); 1 example.

Type 3 cl: G 7660 A; 1 example.

Type 3 am: G 7750 B (2); 1 example.

Type 3 amx: G 7550 B; 1 example.

Type 3 af: G 7820 B; 1 example.

Total examples of type 3: 10 shafts.

Type 4 b (4) x: G 7060 B: 2 examples.

Type 4 b (1): G 7820 A; 1 example.

Type 6 b (2), begun as type 3 or 4 and hastily converted: G 7550 A.

Total number of shafts, 14 shafts in 8 mastabas: 10 of type 3; 3 of type 4; and 1 of type 6.

(g) Mastabas added in lines 5 and 6 south of G 7550 and 7660:

Type 3 af: G 7690 A; 1 example.

Type 3 bf: G 7670 B; 1 example.

Total examples of type 3: 2 shafts.

Type 4 a (1) x: G 7690 B; 1 example.

Type 4 b (1) x: G 7560 B; 1 example.

Type 4 b (1) (unfin.): G 7670 A; 1 example.

Total examples of type 4: 3 shafts.

Type 7 x: G 7560 A; 1 example.

Total number of shafts, 6 in 3 mastabas: 2 of type 3; 3 of type 4; and 1 of type 7 x.

The chambers arranged by their cubic capacity occur in the following order:

	Capacity	Area	Shaft	Remarks
	cu. m.	sq. m.	type	
(21) G 7350 A	167.31	33.8	3 am	Queen Hetep-heres II (?); reign of Shepseskaf (?)
(15) G 7430 A	136.42	42.0	3 am	Prince Min-khaf; granite sarc.; 2 connecting rooms
(26) G 7760 B	122.84	40.71	3 al	gran. sarc.; 'Prince' Min-dedef; 2 connecting rooms
(3) G 7220 A	122.64	41.43	3 amx (stair)	2 connecting rooms; gran. sarc.; Prince Hordedef
(8) G 7410 B	121.22	41.88	3 af	2 connecting rooms; gran. sarc.; Meresankh II
(7) G 7420 A	120.21	32.49	3 cmx	king, husband of Meresankh II; unused
(9) G 7130 B	113.59	43.59	4 a (1)	Prince Khufuw-khaf; 2 rooms and alcove; burial-chamber partly lined; fragmentary red granite coffin
(25) G 7660 A	105.85	27.28	3 cl	wife of Ka-m-sekhem
(18) G 7650 C	100.23	25.7	3 afx	gran. sarc.; Princess Merytyetes
Total, 9 shafts: 2 queens, 3 real princes, 1 princess, 1 wife of a prince, 1 'prince' and 1 wife of a 'prince'.				
(18) G 7650 A	92.44	24.65	3 amx	north shaft in mastaba of Merytyetes and Akhet-hetep
(5) G 7320 A	89.14	26.22	3 af	2 rooms, 2nd unfinished; sarc.; son of Cheops
(20) G 7520 A	88.41	24.56	3 cm	rough-built stone coffin
(1) G 7120 A	87.5	25.0	3 cf 9	red gran. sarc.; Prince Ka-wab; sloping passage
(4) G 7210 B	85.61	25.18	3 af	wife of Prince Hordedef

	Capacity	Area	Shaft	Remarks
	cu. m.	sq. m.	type	
(25) G 7660 B	81.45	32.22	3 afx	2 connecting rooms (W); red gran. sarc.; Ka-m-sekhem, 'prince'
(24) G 7550 B	80.82	24.32	3 amx	'Prince' Duwa-ne-Hor
(2) G 7110 B	77.87	22.25	3 af	unfin.; intended for Hetep-heres II
(12) G 7230 A	64.8	21.6	3 al	open and empty; probably wife
(31) G 7810 B	63.29	19.78	3 bf	canopic pit; turning recess; Prince Zaty
(11) G 7230 B	61.49	18.92	3 clx	altered by Ptol. cuttings; probably a prince
(19) G 7450 A	60.49	22.74	3 al	unfin. rough-built stone coffin; chief shaft
(6) G 7310 B	58.27	27.23	4 a (1)	frags. red gran. sarc. (flat lid); wife of a son of Cheops
(13) G 7330 B	52.53	15.48	3 bf	open and empty; altered by Ptol. cuttings; probably a prince

These twenty-three chambers all have cubic capacities of over 50 cu. m. In the Western Field only one of the Cheops mastabas has a capacity comparable with these, and that is G 4000 N (Prince Hemyuwen) with a capacity of 89.78 cu. m. Attention is to be called to the large size of the isolated mastaba G 2000 in the Western Field, with its chamber of type 2 (unlined) which has a cubic capacity of 204.67 cu. m. This chamber is probably later than the chambers of type 3 in the twin-mastabas of Cem. G 7000. All the rest of the lined chambers in the Western Field are less than 50 cu. m. in size.

(30) G 7820 B	47.56	16.4	3 af	canopic pit; Iynefer . . . , husband of princess
(31) G 7810 A	46.32	18.13	3 afx	coffin-pit; canopic pit; turning recess; wife of Prince Zaty
(17) G 7510 B	45.48	13.11	2 amx (ramp)	tomb of Prince Ankh-haf; probably brother of Cheops
(16) G 7430 B	43.55	13.0	4 a (1) (lined)	2 rooms; 1 unfin.; probably wife of Min-khaf
(23) G 7050 B	38.59	17.95	3 bm	re-used in Ptol. period; tomb of Queen Nefert-kauw
(29) G 7070 B	38.59	18.88	4 b (4) x	w. lst. sarc.; Sneferuw-khaf; grandson of Cheops
(32) G 7560 B	37.71	12.84	4 b (1) x	broken w. lst. coffin; 2 reserve heads
(28) G 7060 B	35.76	17.88	4 b (4) x	w. lst. sarc.; Prince Neferma'at, son of Cheops
(21) G 7530 A	28.79	15.4	4 a (1)	bl. gran. sarc.; Queen Meresankh III
(33) G 7670 B	22.11	11.34	3 bf	pottery models of Dyn. IV
(27) G 7750 A	19.82	6.5	3 bf	empty; wife of 'prince' (?)
(34) G 7690 B	19.3	9.28	4 a (1) x	completely plundered
(34) G 7690 A	19.12	12.58	3 af	completely plundered
(22) G 7350 C	15.81	10.54	4 b (1) (unfin.)	empty and open; sub. to tomb of Hetep-heres II
(26) G 7760 A	15.31	8.75	3 bfx	empty; wife of 'Prince' Min-dedef
(14) G 7330 A	13.68	7.2	3 bf	unfin. and empty; wife of prince (?)
(27) G 7750 B (2)	12.35	6.86	3 am	tomb of 'Prince' . . .
(30) G 7820 A	12.04	6.88	4 b (1)	empty; Princess Nefert-kauw (?)
(33) G 7670 A	4.49	5.26	4 b (1) (unfin.)	completely plundered

	Capacity	Area	Shaft	Remarks
	cu. m.	sq. m.	type	
(10) G 7130 A	3·8	3·62	6 b (2)	wife of Khufuw-khaf (?)
(24) G 7550 A	0·4	0·74	6 b (2)	begun as type 4; unused; intended for wife of (unfin.) Duwa-ne-Hor

Total 44 shafts extending in date from the last few years of Cheops to the end of Dyn. IV.

Nine are over 100 cu. m.; 8 of type 3 and 1 of type 4; all members of the royal family.

Fourteen range from 50 to 100 cu. m.; 13 of type 3 and 1 of type 4 (G 7310 B): 2 sons of Cheops (Ka-wab and Hordedef) and probably 2 other sons (G 7230 B and 7330 B); 1 prince (son of Chephren (?)); 2 'princes' (Ka-m-sekhem, Duwa-ne-Hor); 1 husband of a princess (G 7650 A); 1 intended for Queen Hetep-heres II; 3 wives of princes (G 7120 B, 7310 B, and 7230 A); and 2 unidentified persons, probably of the royal family.

Ten with capacity between 20 and 50 cu. m.; 1 of type 2 (lined), 4 of type 3, and 5 of type 4: 2 queens (Nefert-kauw and Meresankh III); 2 princes (Ankh-haf and Neferma'at); 1 husband of a princess (G 7820 B); 2 wives of princes (G 7810 A and 7430 B); 1 'prince' (7070 B); 2 unidentified persons (G 7560 B with 2 reserve heads, and 7670 B).

Eight shafts with chambers from 10 to 20 cu. m.; 5 of type 3 and 3 of type 4: 1 princess (G 7820 A); 1 'prince' (G 7750 B); 2 wives of 'princes' (G 7750 A and 7760 A); 1 probably wife of a prince (G 7330 A); and 3 unidentified persons (G 7350 C and 7690 A, B), probably all members or descendants of the royal family.

Three shafts of less than 10 cu. m.; 1 of type 4 and 2 of type 6: 1 wife of a prince (G 7130 A); 1 wife of a 'prince' (G 7550 A); and 1 unidentified person (G 7670 A).

The examples of the different types are as follows:

Type 1: no example (27 in the Western Field).

Type 2: 1 in the Eastern Field (10 in the Western Field).

Type 3: 30 in the Eastern Field (1 in Cem. G 4000, row 5, in line 6; 2 in row 3 and line 8; 1 in Cem. G 2100; total 4 in the Western Field).

Type 4: 11 examples in the Eastern Field (2 in Cem. G 4000, latter half; 3 in Cem. G 2100; total 5 in the 3 nucleus cemeteries of the Western Field).

Type 6: 2 examples in the Eastern Field.

The absence of type 1 in the Eastern Field and the prevalence of that type in the early mastabas of the Western Field are facts which emphasize the conclusion that the Eastern Field with its larger norm of core and its great finished twin-mastabas was later in its initiation than the mastabas of the Western Field with their single shafts of type 1. The chambers of the great twin-mastabas of the Eastern Field were no doubt intended to be lined, but no trace of lining was found (not even plaster marks on the walls). The extremely large chambers of type 3 lead to the conclusion that this type was introduced in these mastabas. The chambers of the queen's pyramids were lined. At any rate the introduction of the chamber of type 3 is thus fixed approximately to the end of the reign of Cheops. Type 4, which is a cheaper variation of type 3, with the roof of the passage at the level of the roof of the chamber, also appears in this cemetery. The first example by position was that in G 7310 B (No. 6) for the wife of Prince Ra-bauwf (?), but may have been excavated as late as the reign of Chephren. The next by position is No. 9, G 7130 B, of type 4 a (1), the burial-place of Prince Khufuw-khaf. But the form of this burial-chamber was obviously designed as type 3 a and not completely finished so that it now

appears to be of type 4 a (1). Therefore I exclude this accidental example from the list of chambers of type 4. Probably the earliest is G 7430 B (No. 16) of type 4 a (1), partially lined, which was made for the wife of Min-khaf and made after the accession of Chephren. The other four examples of type 4 are later. G 7530 A is the tomb of Meresankh III, dated to the first year of Shepseskaf; No. 21, G 7530 C, appears to be still later in date; No. 28, G 7060 B, is the tomb of Prince Neferma'at, a son of Cheops, and No. 29, 7070 B, is the tomb of his son. The last-named two of type 4 may be as early as the end of the reign of Chephren or as late as that of Mycerinus.

These facts make it clear that type 3 was introduced in the reign of Cheops in the last few years and was the prevailing type for the important chambers of the reign of Chephren. Type 4 was introduced as a cheaper form of type 3, probably in the reign of Chephren, and became the prevailing type of the later part of Dyn. IV for better burial-chambers. But type 3 continued in use for unusually fine shafts down to the end of Dyn. IV.

The chambers of type 3 in the Eastern Field are considerably larger than the mean size of those of types 1 and 2 in the Western Field, and one chamber of type 4 had a capacity of 113 cu. m. The size of the eastern chambers is further emphasized by the fact that five shafts had two connecting rooms, G 7410 B (No. 8), G 7130 B (No. 9), G 7430 A (No. 15), G 7660 B (No. 25), and G 7760 B (No. 26). Two others, G 7220 A (No. 3) and G 7430 B (No. 16), had a second chamber begun but left unfinished. The five finished two-room chambers all had a granite coffin in the second chamber, and it may be assumed that the second chamber was designed as a coffin-chamber. None of the shafts in the Western Field had two-room apartments in the same sense, although a few later chambers had a coffin-recess in the west wall. The persons represented by the seven shafts with two-room apartments are: (1) Prince Hordedef, (2) Queen Meresankh II, (3) Prince Khufuw-khaf, (4)-(5) Prince Min-khaf and his wife, (6) 'Prince' Ka-m-sekhem, and (7) Prince Min-dedef. Of the two lined chambers one, G 7510 B (No. 17), was of type 2 amx (ramp) and is to be dated, I think, to the early part of the reign of Chephren. The ten other examples of type 2 are all in the Western Field, nine in Cem. G 4000, row 4 and line 7, and one in the isolated mastaba G 2000. They were probably used in the reign of Chephren. The second lined chamber in the Eastern Field, G 7430 B (No. 16), is actually of type 4 a (1) and belonged to the wife of Prince Min-khaf. It is the only lined chamber of type 4 found in the two fields, and appeared, in fact, not to have been completely lined. It must be noted also that the coffin-chamber in the great tomb of Prince Khufuw-khaf had its south wall partly lined with white limestone.

2. COMPARISON OF THE SIZES OF THE BURIAL-CHAMBERS IN MASTABAS AND PYRAMIDS

The shafts as arranged in the order of the cubic capacity of the chambers are obviously not in chronological order. This fact makes it necessary to examine the sizes of the chambers in the approximate chronological order already established.

a. The Normal Size of Chambers of Type 1

The lined chambers of the initial cores of normal size reveal also a normal size of burial-chamber, and the core G 2130, which is larger than normal size, has a chamber of the same size. If we take

the ten chambers thus indicated, the mean size presents an area of 10.14 sq. m. and a capacity of 26.62 cu. m. These chambers present in detail the following variations:

	Core type		Chamber		Rock chamber		
			type	sq. m.	cu. m.		
(1) G 4160	II b: normal	slab-stela	I br	12.16	32.59		sole shaft
(2) G 4150	II b: normal	slab-stela	I ar	10.23	25.06		sole shaft
(3) G 4260	II b: normal	slab-stela	I ar	10.87	20.11		sole shaft
(4) G 4250	II b+IV iii: normal	slab-stela	I ar	10.46	25.52		sole shaft
(5) G 2130	II b: large	..	I cl	9.61	21.62		sole shaft
(6) G 2120	II a: large	slab-stela	I al	11.16	30.13		sole shaft
(7) G 1223	II a+IV iii: large	slab-stela	I brx	9.53	24.8		with annex
(8) G 1203	II a: normal	slab-stela	I cl	9.3	30.69		sole shaft
(9) G 1225	II a+IV iii: normal	slab-stela	I bl	8.96	24.19		with annex
(10) G 1205	II a: normal	slab-stela	I cl	9.99	21.47		sole shaft
Mean size of 10 chambers				10.14	26.62		

The chamber of the cores added to the initial cores follows in general the same mean size. I omit two chambers of unusually small size, one in Cem. G 4000 and one in Cem. G 1200, two unusually large chambers in G 4000, and two in Cem. G 2100. These chambers form a group of nine chambers, as follows:

	Core type		Chamber		Rock chamber		
			type	sq. m.	cu. m.		
(11) G 4350	III i: normal	slab-stela	I cm	11.39	29.04		sole shaft
(12) G 4460	IV i: normal	slab-stela	I am	10.39	30.13		sole shaft
(13) G 4450	IV i: normal	slab-stela	I cm	11.72	29.15		sole shaft
(14) G 4560	IV i: normal	slab-stela	I al	10.65	27.48		sole shaft
(15) G 4550	IV i: normal	no stela	I cm	10.92	29.36		sole shaft
(16) G 2135	II a: normal	slab-stela	I cm	9.24	28.18		sole; no pavement
(17) G 1227	II a: normal	slab-stela	I ar	9.73	28.7		with annex
(18) G 1207	II a: normal	slab-stela	I al	8.64	19.14		sole shaft
(19) G 1235	II a: normal	slab-stela	I af	10.58	30.68		sole shaft

These chambers present a mean area of 10.36 sq. m. and a mean capacity of 26.98 cu. m. The mean of the above nineteen chambers presents an area of 10.23 sq. m. and a capacity of 26.79 cu. m. The variations of size around this mean are not obviously visible in the chambers themselves, and it seems clear that all were executed on much the same general lines as well as in the same manner. I conclude that these chambers were in general carried out by the public works department of the king. Nowhere in chambers privately excavated can any such similarity of size or technique be recorded.

Having established the mean size of the great majority of the lined chambers of type I, it remains to consider those of abnormal size. In the first place there are two chambers of unusually small size, G 4360 and G 1209:

	Core type		Chamber		Rock chamber		
			type	sq. m.	cu. m.		
(a) G 4360	IV i: normal	slab-stela	I ar	7.0	15.4		sole shaft
(b) G 1209	II a: normal	no stela	I cl	6.37	12.42		sole shaft

These small tombs are markedly less than the mean size, but still only a little less than the smaller variation among the nineteen chambers of the above list. I imagine that the two persons concerned or their immediate families failed to secure from the working gangs equal treatment with the other persons concerned. Allowance must always be made for bribery or pressure in such circumstances.

The list of abnormally large chambers is headed by G 4000 N and G 1201. These two mastabas are the largest in the nucleus cemeteries of the Western Field, being exceeded only by the isolated mastaba G 2000:

	Core type	Chamber type	Rock chamber sq. m.	cu. m.	
(a) G 4000 N	II b+IV iii	1 blx	23.32	89.78	chief shaft
(b) G 1201	II a+IV iii: large	1 al	13.6	46.51	slab-stela sole shaft

The increase in the sizes of the chambers of these two abnormally large mastabas is the natural result of the importance of the owners, both royal princes. But there are five mastabas of normal size which have chambers of unexpectedly large size:

(c) G 4660	IV i: normal	?	1 cl	13.32	27.28	sole shaft
(d) G 4650	IV i: normal	no stela	3 cm	15.8	48.19	sole shaft

These two chambers are in the last line (line 6) of the eight mastabas added to Cem. 4000.

(e) G 2100 A	II a: small	slab-stela	1 cl	12.07	34.4	chief shaft
(f) G 2210	II a+VI a	no stela	1 bf	16.5	54.45	sole shaft
(g) G 1233	II a: normal	no stela	1 alx	10.95	39.97	with annex

The beautiful chamber of G 2100 is larger than any of the nineteen chambers listed as being of the ordinary mean size, but is not so far beyond the range as to require any explanation. G 4660 and G 1233 are only a little larger than G 2100. G 4650 is in reality not larger than these, as it was never lined and its capacity, 48.19 cu. m., is the rock-cut capacity. G 2210 is probably the last of the lined chambers, and its extraordinarily large size (16.5 sq. m. and 54.45 cu. m.) is no doubt due to the means of the owner, who reconstructed the old core as a very large mastaba (627.61 sq. m.) of type VI a or VII a.

b. Use of the Normal Size in Chambers of Type 2

The lined chambers of type 2 must be compared in size with the lined chambers of type 1:

	Core type	Type	Lined chamber		Rock chamber	
			Area	Capacity	Area	Capacity
(1) G 4140	III i: normal	2 brx (ramp)	16.49 sq. m.	46.88 cu. m.	23.71 sq. m.	73.57 cu. m.
(2) G 4340	IV i: normal	2 cr (ramp)	10.98 sq. m.	28.57 cu. m.	15.2 sq. m.	42.82 cu. m.
(3) G 4540	IV i: normal	2 ar (stair)	9.86 sq. m.	27.55 cu. m.	20.32 sq. m.	56.89 cu. m.
(4) G 4640	IV i: normal	2 br (stair)	9.22 sq. m.	23.6 cu. m.	13.19 sq. m.	35.08 cu. m.

All of these chambers are in one-shaft mastabas. Only one mastaba, G 4140, had a slab-stela. G 4140 A was lined and paved and the other three were lined but not paved.

Three of these chambers follow closely the size set forth above for the majority of the lined chambers of type 1, namely, G 4340, 4540, and 4640. The other, G 4140, the chamber of the Princess Merytyetes, is abnormally large. Yet all these chambers were clearly cut in the same manner and probably by the same gang of workmen.

With these lined chambers of type 2 the unlined chambers of the same type are to be compared:

	Core type	Chamber type	Rock chamber	
			Area	Capacity
(5) G 4240	IV i: normal	2 bm (stair)	20.01 sq. m.	53.42 cu. m.
(6) G 4440	IV i: normal	2 brx (ramp)	17.62 sq. m.	47.75 cu. m.
(7) G 4740	IV i: normal	2 cr (stair)	16.66 sq. m.	42.64 cu. m.
(8) G 4750	IV i: normal	2 br (stair)	21.65 sq. m.	51.83 cu. m.
(9) G 4760	IV i: normal	2 cr (stair)	16.4 sq. m.	50.84 cu. m.

All these chambers are in one-shaft mastabas. Only one, G 4760, had a slab-stela. These five rock-cut chambers, if they had been lined with masonry, would have presented capacities of about the mean size noted above. The red construction lines on the ceiling of G 4240, G 4440, G 4740, and G 4760 prove that these four were intended to be lined, and it is reasonable to assume that all five were excavated with the intention of lining them. G 4750, after the abandonment of the idea of lining it, was provided with a coffin-recess in the west wall, a unique feature in the chambers of type 2. The condition of these five chambers is no doubt connected with the unfinished condition of the casings of these mastabas.

In comparison with the lined and unlined chambers of type 2 in Cem. G 4000 is to be noted the unlined chamber of G 2000. The mastaba is the largest either in the Eastern or Western Field (5,586.0 sq. m.), a little larger than G 7510 of the Eastern Field. The chamber was intended to be lined, but the lining was never built:

	Core type	Chamber type	Rock chamber		Lined chamber	
			sq. m.	cu. m.	sq. m.	cu. m.
(a) G 2000	III ii: large	2 alx (ramp)	39.36	204.67	27.81	136.26 (indicated by red lines)

The rock-cut chamber is the largest of all the burial-chambers in mastabas of Dyn. IV at Giza, and the lined chamber as designed but not built would have been very much larger than any of the lined chambers.

In the Eastern Field there are two lined chambers and these are to be compared with the mean size obtained in the Western Field:

	Core type	Chamber type	Chamber		Remarks
			type	sq. m. cu. m.	
(1) G 7510	IV iii: large	dec. chapel	2 amx (ramp)	13.11 45.88	sole shaft
(2) G 7430 B	IV ii: twin	chapel	4 a (1)	13.0 43.55	chief shaft; 2 chambers with 2nd unfinished

These two chambers are not far apart in date. The chamber of type 2 is probably the earlier and from the early part of the reign of Chephren. The size is about the same as that of 4140, which is of the same type and the largest of the lined chambers of type 2 in the Western Field. The mastaba 7510 is the largest in the Eastern Field and is about the same size as the great isolated mastaba G 2000 in the Western Field, which, as shown above, would have had a capacity of 136.26 cu. m. if the lining indicated by the red lines had been carried out. The other lined chamber, that of the wife of Prince Min-khaf, was of type IV with two chambers intended, but the second chamber unfinished. The lining was as a matter of fact never completely built. The size of this room was about the same as that of G 7510 and G 4140. The unfinished lining of the coffin-chamber in G 7130 B is entirely anomalous.