QUIPU AS215

Museum identification: 55-32-13302 (Hood Museum of Art, Dartmouth College, Hanover, New Hampshire)

Main Cord: color DB

$ 3.5 cm: pendant cord (1), then space of 1.0 cm

4.5 cm: pendant cord (2), then space of 1.5 cm

6.0 cm: pendant cord (3), then space of 1.0 cm

7.0 cm: pendant cord (4), then space of 4.5 cm

11.5 cm: group of 6 pendant cords (5-10) united by top cord (T1), then space of 1.5 cm

14.0 cm: pendant cord (11), then space of 1.5 cm

15.5 cm: group of 4 pendant cords (12-15), then space of 1.0 cm

17.5 cm: group of 4 pendant cords (16-19), then space of 1.0 cm

19.5 cm: group of 4 pendant cords (20-23), then space of 1.0 cm

21.5 cm: group of 4 pendant cords (24-27), then space of 18.5 cm

41.0 cm: end ¢

Cord	Knots (no.,type,position)	Length	Color	Value	Subsidiaries (no.,position)
1	1E(9.5)	19.5¢	W	1	
2	1E(9.0)	19.0¢	W	1	
3	1E(9.0)	21.5¢	W	1	
4	1E(7.5)	19.5¢	W	1	
5	4L(11.5)	29.0¢	DB:W	4	

Cord	Knots (no.,type,position)	Length	Color	Value	Subsidiaries (no.,position)
6	1s(6.0);4L(12.0)	25.0b	DB:FB	14	2:22.0-22.5
6s1	1s(1.0)	1.0b	W	1?	
6s2	–	1.0b	W	?	
7	7L(12.0)	28.0b	DB:FB	7	1:13.0
7s1	3L(0.0)	2.0¢	DB	3	
8	3s(6.0);7L912.5)	19.0¢	W	37	2:18.0
8s1	2L(2.0)	8.0¢	W	2	
8s2	–	0.0b	FB	?	
9	1s(55)	32.5¢	DB	10	
10	4L(11.5)	29.0¢	DB	4	
T1	7s(3.0);6L(9.0)	11.0¢	DB	76	3:10.0-10.5
T1s1	1s(3.5);3L(5.5)	19.5¢	W	13	
T1s2	2L(2.0)	7.5¢	U^2	2	
T1s3	4L(2.0)	4.0b	DB	4	
11	1s(9.0);4L(17.5)	28.0¢	DB:W	14	
12	1E(16.0)	38.0b	DB:W	1	
13	1s(7.0);1E(16.0)	27.0b	DB:W	11	
14	1E(18.0)	44.0¢	DB:W	1	
15	1E(16.0)	32.0¢	DB:W	1	
16	1E(17.0)	31.0b	DB:W	1	
17	5L(15.0)	26.0b	DB:W	5	1:5.0
17s1	1s(7.0)	18.5b	W	10	
18	1E(16.5)	23.5b	DB:W	1	
19	1E(17.5)	22.0b	DB:W	1	

Cord	Knots (no.,type,position)	Length	Color	Value	Subsidiaries (no.,position)
20	1E(14.0)	25.0b	DB:W	1	
21	1s(8.0)	23.0b	DB:W	10	
22	1E(16.0)	27.0b	DB:W	1	
23	2L(15.5)	23.0b	DB:W	2	
24	1E(15.5)	24.5b	DB:W	1	
25	1s(9.5);1E(15.5)	24.5b	DB:W	11	
26	1E(16.0)	25.0b	DB:W	1	
27	3L(16.5)	24.0b	DB:W	3	

Associated Fragments (F1, F2)[3]					
F1	–	b11.5¢	DB:FB	?	1:3.5
F1s1	4L(2.5)	3.0¢	W	3	
F2	1E(3.0)	b9.5¢	DB:FB	?1	1:0.5;1:5.5
F2s1	1E(2.0)	11.0¢	W	1	
F2s2	3L(1.0)	8.0¢	W-U[2]	3	

Observations

1. The museum records the provenance of the quipu as Nazca and its collector as J. Gayoso.

2. U designates an undyed non-cotton fiber.

3. Two pendant fragments (F1,F2) are stored with the quipu. By color and texture, they appear related to the quipu but there is no place that they seem to have come from. We think that

they were part of the collection of the same quipumaker but not part of this quipu.

4. By spacing and color the quipu is separated into three parts. Part I consists of four widely spaced pendants each W with a single figure-eight knot. Part II is a group of six pendants which differ in color but are united by a top cord. Part III consists of a single pendant and then four groups of four pendants each. All pendants in this part are color DB:W.

5. <u>Part II</u>

a) The value of the top cord on this quipu is the sum of the six pendant values in the group.

b) The subsidiaries on the top cord probably sum the subsidiaries on the pendant cords but three values are in doubt due to breakage. The two W subsidiaries on the second pendant sum to at least 10 and another on the fourth pendant has value 2. A DB subsidiary on the third pendant has value 3 and an FB subsidiary on the fourth pendant is broken. These can be associated respectively with the following top cord subsidiaries: a W with value 13, a U with value 2, and a DB with value 4.

6. <u>Part III</u>

a) The four groups of four pendants each can be described as:

P_{3ij} where i=1,...,4 is the group and j=1,...,4 is pendant position in group.

b) The rank order of pendant values is the same for all groups. Also, in every group the first and third positions have value 1. That is,

$$11 \geq P_{3i2} > P_{3i4} \geq P_{3i3} = P_{3i1} = 1 \quad \text{for } i=1,\ldots,4$$

c) P11, the pendant preceeding the four groups, has value 14 as does the sum of the first and third groups. That is,

$$P11 = \sum_{j=1}^{4} P_{31j} = \sum_{j=1} P_{33j}.$$

7. <u>Parts II and III Related</u>

a) Parts II and III are set off from Part I by a large space along the main cord.

b) The single group in Part II summarizes the values in Part III. Each of the pendant values in the group can be associated with a value or sum of values in Part III. Furthermore, the association involves all the values in Part III. Calling the six pendant values in Part II P_{21j} where $j=1,\ldots,6$:

$$P_{211} = 4 = \sum_{j=1}^{4} P_{31j} \quad (\text{or } \sum_{j=1}^{4} P_{33j});$$

$$P_{212} = 14 = P11;$$

$$P_{213} = 7 = \sum_{j=1}^{4} P_{34j};$$

$$P_{214} = 37 = \sum_{j=1}^{4} P_{32j};$$

$$P_{215} = 10 = P_{322} \text{ subsidiary};$$

$$P_{216} = 4 = \sum_{j=1}^{4} P_{33j} \quad (\text{or } \sum_{j=1}^{4} P_{31j}).$$

c)   The top cord which sums the pendant values in Part II, therefore, also carries a value (76) that is the sum of all the values in Part III.