

**Table 2***Statistical duplicate system for the Roman emperors' list*

No.	Duplicate system (century)	Shifts (years)
1	VII B.C. ← III A.D.; ← V A.D.	<b>150, 1050, 1200</b>
2	VI B.C., I A.D. ← II A.D.; ← VI A.D.	<b>750, 1050</b>
3	I-III A.D. ← III-VI A.D.	250-300, 950-1050
4	I, III ← XI, XIII	1,000-1050
5	IV, V ← VI	100-200
6	VI ← X; ← XIII	500, <b>700</b>
7	VIII, IX ← c. 900 A.D.	100
8	IX ← XI <sub>2</sub> , XII: ← c. 1400 A.D. ← c. 1500 A.D. ← c. 1600 A.D.	200-400
9	X-XIII ← XIII	<b>300</b>
10	XI ← c. 1350 A.D.	<b>300</b>
11	XII, XIII ← c. 1350 A.D.: ← (1500-1550 A.D.) ← (1600-1625 A.D.)	200-400

See Table 1.

## 16 Main results

Let us resume and formulate the main results.

(i) Ancient and medieval narrative data (see above) possess explicit statistical regularities and statistical duplicates which appear only earlier than the 13th century A.D.

(ii) The time interval from the 13th to the 20th century A.D. does not contain strong statistical duplicates. The part of the name lists (see above) corresponding to the time interval from the 13th to the 20th century A.D. satisfies the frequency damping principle.

(iii) We discover the system of rigid shifts in each list. It is interesting that the basic shifts are the same for the different independent lists. These basic shifts are equal (approximately) to 300-330 years, 600-720 years and 1000-1050 years. The shift by 720 years is perhaps a doubled shift by 300-330 years (or  $720 = 1050 - 330$ ).

## 17 The tables

We demonstrate the square matrices for the following lists: list 1, name list for Roman popes (Table 3); list 2, name list for Roman emperors, (Table 5); list 3, name list for Byzantine emperors (Table 6); list of popes' nationalities (Table 4). Then we demonstrate the relation matrices for: name list of Roman popes (Table 7), name list of Roman emperors (Table 8), and name list of Armenian catholicoses (Table 10). Let us discuss the way the matrices are described in Tables 3, 5 and 6. The first number in brackets indicates the number of the row in the matrix. The second number indicates the number of the column which contains the first nonzero element of a given row. Then, after the colon, we write the sequence of all nonzero elements in this row till the next zero element. We do not write this zero element. Then we write the number of the next column which contains the next nonzero element in this row. We iterate this process to the end of the row. For example, the notation (1) 1:1, 1; 10:2, 45, 6 is decoded as follows: in the first row of the matrix we have only two 'connected groups (components)' of nonzero elements. The first group begins as the 1st column; the second group begins from the 10th column. We do not write the zero rows. Let us demonstrate the square name matrix for the Roman