

until 1690 A.D. However, the research has not been completed, because the frequency of the name use in the stream of Byzantine pontifices turned out to be considerably less than that of the popes, which makes the elements of the square matrix  $K\{t\}$  small, and the investigation of the graph more difficult.

We now describe the results of statistically processing the rectangular and square name frequency matrices constructed by V. P. Fomenko, T. G. Fomenko and the author for the Old and New Testament, broken into 218 chapters generations. The total number of different names mentioned there is 1,977, whereas that of multiple mentions reaches several tens of thousands. Thus, the rectangular matrix describing the evolution of biblical name frequencies has 1,977 rows and 218 columns. The square matrix  $K\{t\}$  has 218 rows and the same number of columns (Fig. 30 (a), 30 (b)). For the square matrix of the parallel biblical passages, see Fig. 69. We have already described the results of the statistical investigation which led to the discovery of a series of new and earlier unknown Old and New Testament duplicates in our earlier publications. All of them are made manifest by the powerful repeated splashes in the averaged graphs of  $K_{\text{aver}}^{ij}(t)$ , i.e., the names first appearing in the chapter  $t_0$  are then again found in certain subsequent chapter generations. We now concentrate our attention on one of the principal duplicate series of form T (see the GCD in Figs. 65 and 66, upper line), which are the chapter generations listed below. We also indicate in parentheses their corresponding fragments from the Old and New Testament, and their spelling in terms of the standard division into books, usual chapters and verses. Thus, T: Chapter generation 1 (Genesis 1–3), T:15 (Genesis 6–8), T:49 (Genesis 11:1–9), T:60 (Genesis 12), T:73 (Genesis 39–50), T:74 (Exodus), T:97 (Book of Judges 19–21), T:98–102 (Ruth, First and second Books of Samuel, First Book of Kings 1–11), T:137 (Second Book of Kings 24), T:138–140 (First Book of the Chronicles and Second Book of the Chronicles 1–9), T:165–167 (Second Book of the Chronicles 34–36). Finally, the duplicates of the T series are the following chapter generations: 1, 15, 49, 60, 73, 74, 97, 98–102, 137, 138–140, 165–167. All of them are so explicit that they show themselves also upon applying other duplicate recognition methods.

## 6.2. The mean age of all old historical names and the frequency-damping principle for the matrix columns

We now give the results obtained on repeatedly investigating the same name frequency matrix, but from a somewhat different point of view. We mean the same repeated splashes of the graphs of  $K(t_0, t)$ , but which are manifest if we apply a somewhat different method for the matrix investigation, realized by G. Nosovsky on a computer. Consider the sequence of chapter generations  $X(t)$ , where  $t$  ranges from 1 to  $n = 218$  in the case of the Old and New Testament. Fix  $t$ , and consider its corresponding chapter  $X(t)$ . Consider the rectangular name matrix and its companion square matrix  $K\{t\}$ . Then all the names mentioned in  $X(t)$  are distributed in the column  $t$  in the rectangular and square matrices. We call the number of chapter generations separating the name from the moment it appeared in the chapter  $X(t)$  for the first time its age. The age of the name placed in the intersection of the row  $t_0$  and column  $t$ , i.e., in block  $K(t_0, t)$ , equals  $t - t_0$ , or the distance from  $K(t_0, t)$