

probability of appearance of such or a lesser distance is small, then it is natural to reject the hypothesis regarding the independence of  $X$  and  $Y$ , and regard them as related, or dependent in our sense. The computational experiment dealt with 12 texts (see Table 1). We performed the modelling for truncated normal and Poisson distributions. Therefore, we give two probabilities calculated for each of them. The first number is the probability for the normal distribution, and the second for the Poisson distribution. Denote by  $E$  the number of maxima of the volume graph, and indicate the bounds for the described historical periods in parentheses. It can be seen from the table that the approaches of the present section and [15] (Part 1, Ch. 2, §4) mostly lead to qualitatively the same results, which makes us hope that my initial hypotheses regarding the representability of information about the splashes of the volume functions for historical texts is correct.

## 2. The Maximum Correlation Principle and Its Verification by Frequency Histograms. Method for the Discovery of Dependent Historical Texts. The Period of “Confusion” in the History of Russia (1584–1600 A.D.)

As another example, we give the results of an analysis of a collection of sources dating from the end of the 16th and beginning of 17th cc. A.D., the period of “confusion” in the history of Russia. The investigation was performed by the author in 1981–1982. The large textual volumes and complexity of integer relations create enormous difficulties if we intend to study the texts traditionally. The 30 sources were separated into annual fragments, or “chapters”, and then the volume of each portion in words was determined. The job was done by N. S. Kellin and L. E. Morozova at the author’s request. The obtained data were systematized and tabulated, indicating the textual volumes for each year from 1584 to 1619, the period traditionally referred to as “confusion”. Part of the table (from 1584 to 1598) is given in Table 2, marking off years on the horizontal axis and the numbers of the following basic historical texts along the vertical axis, viz.,

- (1) *Povest’ o chestnom zhytii*, (2) *Povest’ kako voschytiti*, (3) *Povest’ kako otomstiti*, (4) *Zhytiye Dmitriya* (T.), (5) *Zhytiye Dmitriya* (M.), (6) *Skazaniye o Grishke*, (7) *Skazaniye o Fyodore*, (8) *Skazaniye o samozvantse*, (9) *Povest’ Shakhovskogo*, (10) *Zhytiye Iova*, (11) *Skazaniye Avraamiya* (1), (12) *Skazaniye Avraamiya* (2), (13) *The 1617 Chronograph*, (14) *Vremennik Timofeeva*, (15) *Povest’ Katyreva* (1), (16) *Povest’ Katyreva* (2), (17) *Inoye skazaniye*, (18) *Piskarevskiy letopisets*, and (19) *Novyi letopisets*.

The volume graph was constructed for each text, and years in which they exhibit splashes were indicated by 1 in Table 3. We also studied *Izvet Varlaama, Bel’skiy letopisets* and *Skazaniye o Skopine*.