



Figure 84. Frequency histogram for the pair relation in the matrix

By means of the study of the relation conditional distribution frequency histograms in the matrix in condition of a fixed number of common names in the neighbourhoods, thresholds were then defined, separating the essential relations (the conclusion being that the neighbourhoods do contain duplicating fibers) and inessential relations (with the conclusion that the neighbourhoods are independent) (Fig. 84).

The essential relation matrix (or, simply, relation matrix) thus obtained provides for a decomposition of the list into duplicate systems (meanwhile, different systems can intersect, i.e., certain parts of the list can possibly “fiber”).

We note briefly certain overlappings determined by the constructed matrices. All of them are *completely consistent with the GCD decomposition obtained by the author.*

(1) Three sharp splashes of heresies in church history, viz., during the 4th c., the “heresy age”; in the 12–13th cc. A.D., the Albigenes heresy, war with the heretics, establishment of the Inquisition; and the heresies of the 13–16th cc., strengthening of the Inquisition, religious wars (see Fig. 85).

(2) The church schism in 1054 A.D.; irrevocable separation of the church in 1204 A.D. (see Fig. 85).

(3) Three papal elections under Henry III around 1050 A.D.; the three popes in 1378–1417 A.D. during the Great Schism (see Fig. 85).

(4) The Roman Empire in 753–523 B.C.; the Roman Empire in 82 B.C.–217 A.D. (see Fig. 86).

(5) The Roman Empire in 82 B.C.–217 A.D.; the Roman Empire in 270–526 A.D.; the Holy Roman Empire in 926–1254 A.D. (see Fig. 86).

(6) The Carolingians in 681–887 A.D., the Holy Roman–German Empire in 962–1254 A.D. and the Hapsburg Empire in 1273–1619 A.D. (see Fig. 86).