

Denote by f_1 , f_2 and f_3 , respectively, the distributions of the random variable ξ_1 relative to the probabilities P , P_A and P_B , viz.,

$$f_1(k) = P(\xi_1 = k), \quad f_2(k) = P_A(\xi_1 = k), \quad f_3(k) = P_B(\xi_1 = k).$$

Let us consider the three random variables

$$\xi_1, \xi_2, \xi_3, \quad \xi_1(w) = \xi_2(w) = \xi_3(w),$$

which are defined on the three different probability spaces (Ω, Σ, P) , (Ω, Σ, P_A) and (Ω, Σ, P_B) and have distributions f_1 , f_2 , and f_3 , respectively.

In the sequel, we will also use the term "frequency histogram" for the distributions of random variables defined on a finite probability space.

In general, we will call the frequency histograms of random variables of type ξ_2 and ξ_3 , i.e., the conditional distributions of the random variable ξ_1 on a certain "locally" determined condition, the *related name scattering frequency histograms*, meaning the "relation" in the sense of this condition. We will call the histogram $f_1(k) = P(\xi_1 = k)$ simply a *name scattering frequency histogram*.

3. Correct and incorrect chronology in the name list. Frequency histograms. We now come to the investigation of the structure of the list X by comparing the distribution of the random variable ξ_1 with ξ_2 and ξ_3 . In particular, the natural ideas of how the ruler's names should be arranged chronologically "correctly" lead us to the following statement.

(A) If the chronology of the name list is correct, then the condition $u_i \sim u_j$ (or $u_i \approx u_j$) imposed on the names u_i, u_j from I does not influence the details of the mutual disposition of u_i, u_j with respect to the whole of X .

It is clear that Statement (A) is closely related to the frequency-damping principle (see [24]): As a matter of fact, we assume that the "local" relations in the chronologically correct list must not lead to any global relations.

By means of ξ_1, ξ_2, ξ_3 , (A) can be made more precise as follows:

(B) The random variables ξ_1, ξ_2, ξ_3 constructed from the chronologically correct list should be distributed similarly. In other words, the distribution of ξ_1 should not depend either on the event A or B .

Remark. It is clear that a certain divergence of the distribution of ξ_1 from ξ_2 (or ξ_3) will arise even in the case where (A) is valid, just because of the finiteness of the scheme. However, we consider here sufficiently long lists containing about 300 to 600 entries, and will neglect their finiteness.

Assume now that the chronological list X under investigation contains some duplicates, with the system S_1, S_2, \dots, S_m of the most frequent (typical) shifts among them. We do not suppose that X is divided into disjoint duplicate systems, for those from different groups may overlap (cf. the concept of "fibred chronicle" from [21]).

With this assumption, the distribution of the random variable ξ_1 is naturally dependent on the condition (event) A (and B). In fact, if two names u_i and u_j fell into a chapter X_l (or were "born" there), then we should also expect them to be found among the duplicates of X_l . Thus, the value of the scattering of any two entries in the list X containing them will more often be close to zero, and the shifts